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May 1986 - April 1987

Compiled by
THOMAS E. BOLTON

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mai 1986 à avril 1987

Prepare par
THOMAS E. BOLTON

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TRAVAUX EN COURS DANS LE DOMAINE DES SCIENCES GÉOLOGIQUES AU CANADA, DE MAI 1986 À AVRIL 1987

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THOMAS E. BOLTON

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INTRODUCTION

The present publication recording research in progress in Canada from May 1986 to April 1987 is the result of a survey conducted between January, 1987 and March, 1987.

The research projects listed in this compilation are being undertaken mainly within federal and provincial departments, and universities. A relatively complete overview of scientific research activities within Canada in the geological and allied sciences is provided for the survey period.

Using the data supplied for this compilation by the respondees, some indication as to the lines of research receiving the greatest and least attention can be formulated. At least 290 research projects have not been previously reported. The greatest increase during the 1986-87 period was in the fields of Mineral/Energy Geoscience (64), Areal Mapping (43) and Geochemistry (29). Research projects undertaken as graduate thesis in the universities are so specified wherever possible.

Additional details on research in the earth and related sciences underway in Canada during 1986 can be obtained through the annual reports prepared by individual university departments, research councils, and museums. Comprehensive reports on geophysical research and development, including volcanology and oceanography related research, are contained within the Canadian Geophysical Bulletin published by the Department of Energy, Mines and Resources. Summaries of progress and short research reports related to hydrology/water-related environmental research and glaciology are provided annually by the Water Resources Branch of the Department of Environment Canada and the Associate Committee on Hydrology, National Research Council. Quaternary research in Québec is reviewed annually in the "Bulletin d'information de l'Association québecoise pour l'étude de Quaternaire".

Again this year a listing is included of the 1986 awards provided for geological research within the Research Agreements program of the Department of Energy, Mines and Resources Canada. The Natural Sciences and Engineering Research Council Canada also provided a computer print-out of the operating grants actually awarded in 1986. The 1986 Ontario Research Grants and Polar Continental Shelf Project field support to non- governmental activities are also listed.

Use of the compilation

The projects are grouped under main headings that cover the majority of disciplines within the geological and allied sciences. These groupings are unchanged from last years compilation (Geological Survey of Canada, Paper 86-5, 1986).

A complete list of organizations contributing to the present survey is included. Acknowledgment is made in particular to those who assembled and forwarded the data on research projects underway in the organizations under their direction. As a convenience, an alphabetically arranged index lists each investigator and the reference number(s) of the project(s).

INTRODUCTION

La présente publication, qui fait état de la recherche réalisée au Canada de mai 1986 à avril 1987, est le fruit d'une enquête effectuée entre Janvier 1987 et mars 1987.

Les projets de recherche enumères sont exécutés surtout par des ministères fédéraux et provinciaux, et par des universités. Un aperçu assez complet de l'activité de recherche scientifique au Canada pour la periode visée dans le domaine de la géologie et des sciences connexes est cependant fourni.

À partir des renseignements donnés par les participants à l'enquête, il est possible de voir quels genres de recherche retiennent le plus et le moins l'attention. Au moins 290 projets nous ont été signalés pour la première fois. Les domaines où la recherche s'est le plus accrue durant l'année 1986-1987 sont les sciences de la Terre- Énergie/Minéraux (64), la Cartographie (43) et la Géochime (29). Les projets de recherche de 2^e cycle, dans les universités, sont également précisés, dans la mesure du possible.

On peut se procurer de plus amples détails sur la recherche réalisée en 1986 au Canada dans le domaine des sciences de la Terre et des sciences connexes en consultant les rapports annuels mis au point par les différents départements l'universités, conseils de recherche et musées. Le volume du Canadian Geophysical Bulletin, publié par le ministère de l'Énergie, des Mines et des Ressources, comprend des rapports complets sur les travaux de recherche et les dernières réalisations en géophysique, y compris la recherche connexe en volcanologie et en océanographie. Des résumés des progrès réalisés et de brefs rapports ayant trait à la glaciologie et à la recherche environnementale liée à l'hydrologie sont publiés annueullement par la Direction des ressources en eau d'Environnement Canada et par le Comité associé de l'hydrologie, du Conseil national de recherches du Canada. La recherche sur le Quaternaire au Québec est signalée anneullement dans le "Bulletin d'information de l'Association québecoise pour l'étude du Quaternaire".

Nous incluons à nouveau cette année une liste des prix décernés en 1986 pour la recherche géologique dans le cadre du programme d'accords de recherches du ministère de l'Énergie, des Mines et des Ressources du Canada. Le Consiel de recherches en sciences naturelles et en génie du Canada a également fourni un imprimé d'ordinateur détaillant les subventions aux travaux réellement accordées en 1986. On a signalé également dans ce rapport les subventions de recherche de la Commission Géologique de l'Ontario (Ontario Research Grants) et l'aide de l'Étude du plateau continental polaire en faveur d'activités non gouvernementales pour 1986.

Présentation

Les projets sont groupés sous des titres généraux s'appliquant à la majorite des disciplines que comprennent la géologie et les sciences connexes. Ces catégories sont les mêmes que l'année dernière (Étude 86-5, Commission géologique du Canada, 1986).

Une liste complète des organismes qui ont contribué à l'enquête a été dressée. Nous tenons à remercier particulièrement les personnes qui ont recueilli et envoyé les données concernant les projets de recherche en cours dans les organismes dont elles sont responsables. Pour vous faciliter la consultation, un répertoire alphabétique donne les noms de tous les enquêteurs et le(s) numero(s) de reférence de son(ses) projets(s).

AREAL MAPPING, 1:50,000 OR MORE DETAILED/CARTOGRAPHIE, 1:50,000 OU À PLUS GRANDE ÉCHELLE

BRITISH COLUMBIA/ COLOMBIE-BRITANNIQUE

1. ALLDRICK, D.J.,
McMILLAN, W.J., British Columbia Ministry Energy, Mines, Petrol. Res:
Salmon River project, Stewart area (NTS 104B/1), British Columbia, 1982-87.

See:

Geochronology of the Stewart Mining Camp (104B/1); British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 81-92, 1987.

Volcanic stratigraphy, structure and geologic history of the Stewart Mining Camp.

2. ANDERSON, R.G., Geol. Surv. Can.:
Geology of the Iskut River – Telegraph Creek area, British Columbia, 1984-.

See:

Plutonic rocks in the Dawson map area, Yukon Territory; Geol. Surv. Can., Paper 87-1A, p. 689-697, 1987.

3. BROWN, D.A.,
ARMSTRONG, R.L., Univ. British Columbia (Geological Sciences):
Stratigraphy, structure, mineralization, and geochronometry of the Silbak Premier mine area (104A/4 and 104B/1), 1984-87; M.Sc. thesis (Brown).

See:

Geochronology of the Stewart Mining Camp (104B/1); British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 81-92, 1987.

Hazelton-Bowser Lake Group stratigraphy and structure in the vicinity of the Silbak Premier Mine, northwestern British Columbia; Geol. Surv. Can., Paper 87-1A, p. 143-151, 1987.

Field mapping completed in summer of 1985, lab work completed in winter of 1985/86, writing in progress with expected completion in spring 1987.

4. CHURCH, B.N., British Columbia Ministry Energy, Mines, Petrol. Res.:
Geology and mineralization in the Bridge River mining camp, British Columbia, 1986.

See:

Geology and mineralization of the Bridge River mining camp; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 23-29, 1987.

The Pacific Eastern gold prospect, Pioneer Extension Property, Lillooet Mining Division; ibid., Paper 1987-1, p. 31-33, 1987

Regional mapping and property evaluations in the camp, covering parts of the Bralorne, Noaxe and Birkenhead NTS sheets, were initiated by the Ministry in response to intense mineral exploration activity stimulated by rising gold prices.

The area is underlain by 15 mappable units comprising bedded volcanic and sedimentary assemblages and a variety of intrusive igneous rocks ranging from Paleozoic to Tertiary age. These units are faulted and locally invaded by quartz veins which form the loci of gold mineralization.

5. CHURCH, B.N., British Columbia Ministry Energy, Mines, Petrol. Res.:
Geology and mineralization in the Greenwood mining camp, British Columbia.

See:

Geological setting and mineralization in the Mount Attwood-Phoneix area of the Greenwood mining camp; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1986-2, 1986.

The Mount Attwood-Phoneix area is centred around the old mining town of Greenwood on transprovincial Highway 3 in south-central British Columbia. Regional mapping of this 250-square-kilometre quadrangle was prompted by continuing mining exploration and ore production. This report gives the results of recent geological work and summarizes previous investigations including some property examinations.

Twenty-two geological units are distinguished in the Mount Attwood-Phoenix area. These include a wide-ranging variety of Paleozoic to Tertiary beds that have been disturbed by multiple episodes of deformation and igneous intrusion.

6. DIAKOW, L.J.,
KOYANAGI, V.M., British Columbia Ministry Energy, Mines, Petrol. Res.:
Geology and setting of mineral occurrences in the Whitesail Lake area, north-central British Columbia, 1986-87.

See:

Geology of Whitesail Reach and Troitsa Lake map areas; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 171-179, 1987.

Epithermal and mesothermal veins containing Au-Ag-Cu-Pb-Zn mineralization occur in Chikamin and Whitesail ranges. Regional mapping at 1:50 000 scale will define geologic parameters influencing the distribution of known mineral occurrences and assist in outlining new areas of precious metal exploration potential.

7. DODDS, C.J., Geol. Surv. Can.:
Geology of Skagway (104 M) map-area, British Columbia, 1982-.

8. FRIEDMAN, R.M.,
ARMSTRONG, R.L., Univ. British Columbia (Geological Sciences):
Geology and geochronometry of the Tatla Lake Metamorphic Complex: An Eocene metamorphic core complex on the western edge of the Intermontane Belt, SW interior B.C. southwestern interior British Columbia, 1984-87; Ph.D. thesis (Friedman).

Field mapping completed summer 1985; Geochron (U-Pb zircon, K-Ar, RbSr) complete. Spring'87 Geochem will be completed; Electron Probe work (Geo-Thermobarometric work late spring; spring/ summer'87 thesis writing.

9. GLOVER, J.K.,
SCHIARIZZA, P., British Columbia Ministry Energy, Mines, Petrol. Res.:
Taseko/Bridge River M.D.A., regional mapping project, British Columbia, 1986-90.

See:

Geology and mineral potential of the Warner Pass map sheet; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1.

This study documents: (1) critical field relationships that provide constraints on the geometry and timing of deformation along the eastern margin of the Coast Plutonic Complex; and (2) the distribution and structural/stratigraphic setting of hydrothermal alteration zones, associated porphyry and epithermal gold mineralization and geochemical anomalies.

10. GREIG, C.J., ARMSTRONG R.L., Univ. British Columbia (Geological Sciences):
Geology and geochronology of the Eagle Plutonic Complex, Coquihalla area, southwestern British Columbia, 1986-88; M.Sc. thesis (Greig).

Field mapping completed in summer of 1986, lab work in progress with expected completion in spring 1988.

11. HOY, T., British Columbia Ministry Energy, Mines, Petrol. Res.:
Proterozoic Purcell Supergroup, southeastern British Columbia, 1976-87.

To map Purcell Supergroup rocks in southeastern British Columbia and to relate tectonics and sedimentology to origin of stratabound lead-zinc deposits, including the Sullivan deposit.

12. HOY, T., British Columbia Ministry Energy, Mines, Petrol. Res.:
Geology of the Cottonbelt lead-zinc-magnetite layer, carbonatites and alkalic rocks in Frenchman Cap area, Shuswap Complex, southeastern British Columbia, 1978-87.

See:

The Mount Grace carbonatite – a Nb and LREE-enriched marble of probable pyroclastic origin in the Shuswap Complex, southeastern British Columbia; Economic Geol., vol. 81, 1986.

Carbonatites and associated alkalic rocks, Perry River and Mount Grace areas, Shuswap Complex, southeastern British Columbia; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 87-1, p. 69-82, 1987.

Involves 1:50 000 scale mapping of the northwestern margin of Frenchman Cap dome and study of geology and origin of carbonatites, alkalic rocks in the Cottonbelt lead-zinc-magnetite layer.

13. HOY, T., British Columbia Ministry Energy, Mines, Petrol., Res.:
The Rossland Group, southeastern British Columbia, volcanology and contained gold deposits, 1987-90.

To determine internal stratigraphy and structure of the Rossland Group south of Nelson, to present models regarding its origin, and to study contained mineral deposits.

14. MacINTYRE, D.G., BROWN, D.A., DESJARDINS, P., MALLETT, P., British Columbia Ministry Energy, Mines, Petrol. Res.:
Metallogeny of the Babine Range, British Columbia, 1984-88.

See:

Babine project (93L 10/15); British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1.

To map the Babine Range at 1:50 000 scale and develop a metallogenic model for the area as a whole.

15. MASSEY, N.W.D., FRIDAY, S.J., British Columbia Ministry Energy, Mines, Petrol. Res.:
Sicker project, British Columbia, 1986-90.

See:

Geology of the Cowichan Lake area, Vancouver Island (92C/16); British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 233-229, 1987.

To map three 1:50 000 NTS sheets covering the Cowichan-Horne Lake Uplift, southern Vancouver Island. This geanticlinal uplift is cored by the Paleozoic Sicker Group, which host several types of mineral deposits including polymetallic Kuroko-type massive sulphides.

16. McLAREN, G.P., British Columbia Energy, Mines, Petrol. Res.:
Mineral potential of the Chilko-Taseko Lakes area, British Columbia, 1985-87.

See:

Geology and mineral potential of the Chilko Lake area (92N/1,8; 920/4); British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 231-243, 1987.

17. McMECHAN, M.E., Geol. Surv. Can.:
Detailed geological study of selected areas within the Foothills and Rocky Mountain Belts between Peace River and Smoky River with emphasis on structure, British Columbia and Alberta, 1981-.

18. MOTT, J.A., DIXON, J.M., HELMSTAEDT, H., Queen's Univ. (Geological Sciences):
Structure and stratigraphy of the Eastern Main Ranges, White River region, British Columbia, 1984-88; Ph.D. thesis (Mott).

See;

Ordovician stratigraphy and the structural style at the Main Range-Front Ranges boundary near Smith Peak, British Columbia; Geol. Surv. Can., Paper 86-1B, p. 457-465, 1986.

19. NELSON, J., BRADFORD, J., British Columbia Ministry Energy, Mines, Petrol. Res:
Geology and mineral deposits Midway-Cassiar area, northern British Columbia, 1986.

See:

Geology of the area around the Midway deposit, northern British Columbia (1040/16); British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 181-192, 1987.

20. PRICE, R.A., Geol. Surv. Can.:
Operation Bow-Athabasca, British Columbia and Alberta, 1965-.

21. RAY, G.E., DAWSON G.L., British Columbia Ministry Energy, Mines, Petrol. Res.:
Hedley mapping project, southern British Columbia, 1986-88.

See:

The geology and controls of Skarn mineralization in the Hedley Gold Camp, southern British Columbia; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 75-79, 1987.

To map the eastern sedimentary facies of the Late Triassic Nicola Group and determine the controls of mineralization and the geochemistry of numerous stratigraphically controlled gold skarns in the district.

22. TEMPELMAN-KLUIT, D.J., Geol. Surv. Can.:
Penticton map area 82E, British Columbia, 1983-.

23. WOODSWORTH, G.J., Geol. Surv. Can.:
Eastern margin of the Coast Plutonic Complex, British Columbia, 1980-.

See:

The Gambier Group in the Sky Pilot area, southwestern Coast Mountains, British Columbia; Geol. Surv. Can., Paper 86-1B, p. 685-692, 1986.

MANITOBA/MANITOBA

24. BAILES, A.H., Manitoba Energy and Mines (Geol. Services):
Chisel-Morgan Lakes project, Manitoba, 1986-89.

The 1:20 000 mapping project is designed to develop a coherent volcanic stratigraphy for this important base metal mining area and to outline the main features of a regionally extensive hydrothermal alteration system.

25. BAILES, A.H., SYME, E.C., Manitoba Energy and Mines (Geol. Services):
Flin Flon-White Lake project, Manitoba, 1979-88.

A final map with marginal notes is available now and a comprehensive report will be released in 1988.

26. CORKERY, M.T., CAMERON, H.D.M., LENTON, P.G., Manitoba Energy and Mines (Geol. Services):
Cross Lake project, Manitoba, 1983-89.

27. SYME, E.C., Manitoba Energy and Mines (Geol. Services):
Athapapuskow Lake, Manitoba, 1985-89.

See:

Schist Lake area (Athapapuskow project); Manitoba Energy and Mines, Rept. Field Activities, p. 36-42, 1986.

Mapping of the Early Proterozoic Amisk Group southeast of Flin Flon will determine volcanic stratigraphy and the stratigraphic and structural setting of mineral deposits. Geochemical characteristics of volcanic and plutonic uints are also being investigated.

28. ZWANZIG, H.V., SCHLEDEWITZ, D.C.P., LENTON, P.G., McRITCHIE, W.D., Manitoba Energy and Mines (Geol. Services):
Kisseynew project, Manitoba, 1983-89.

Attempts are made to correlate the sedimentary rocks along the south flank of the Kisseynew Complex inspite of the high metamorphic grade and local variations in lithology.

NEW BRUNSWICK/ NOUVEAU-BRUNSWICK

29. BARR, S.M., Acadia Univ. (Geology):
Field relations, petrogenesis, age and economic potential of plutonic and associated metavolcanic rocks, eastern Caledonian Highlands, New Brunswick, 1985-.

See:

Field relations, petrology and age of plutonic and associated metavolcanic and metasedimentary rocks, Fundy National Park area, New Brunswick; Geol. Surv. Can., Paper 87-1A, p. 263-280, 1987.

Geological mapping and petrological studies of plutonic and metavolcanic in the Fundy National Park area of the eastern Caledonian Highlands indicate that all of these units formed in a volcanic arc environment. The granitoid rocks have characteristics of I-type intrusions, and Rb-Sr (whole-rock) and K-Ar (amphibole) ages of about 600 Ma.

30. WILSON, R.A., New Brunswick Natural Res., Energy (Mineral Res. Div.):
New Denmark project (Mineral Development Agreement), 1986-89.

To produce detailed geological maps of a portion of Victoria County, New Brunswick (parts of NTS sheets 21 J/13, 14, O/3, 4) which have been only sketchily mapped by previous reconnaissance-type surveys. Field mapping began in 1986, to be completed in 1987, followed by publication of map report and ten 1:20 000 scale geology maps.

NEWFOUNDLAND/LABRADOR/ TERRE-NEUVE/LABRADOR

31. COLMAN-SADD, S., Newfoundland Dept. Mines and Energy:
Bay D'Espoir – Great Burnt Lake – Snowshoe Pond, Newfoundland, 1974-87.

See:

Geology of part of the Snowshoe Pond (12A/7) map area; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

32. DICKSON, W.L., O'BRIEN, S.J., BLACKWOOD, R.F., POOLE, J., DELANEY, P.W., Newfoundland Dept. Mines and Energy, Memorial Univ. (Earth Sciences):
South Coast granites – Kaegudeck, Newfoundland; M.Sc. thesis (Poole).

See:

Geology of the Burgeo Granite and associated rocks in the Ramea (11P/11) and La Hume (11P/10) map areas; Newfoundland Dept. Mines and Energy, Mineral Rept. 87-1, 1987.

Geology of the central portion of the Hermitage Flexure area, Newfoundland; ibid., 1987.

Geology of the Mt. Sylvester (2D/3) map area, central Newfoundland; ibid., 1987.

Burgeo, Newfoundland; Newfoundland Dept. Mines and Energy, Map 87-32, 1987.

1;50 000 mapping of Acadian granitoids, geochemical sampling; structure and stratigraphy of Ordovician Baie D'Espoir Group with geochemistry of gold prospects.

33. GOWER, C.F., Newfoundland Dept. Mines and Energy:
The Grenville Province in eastern Labrador, 1979-.

See:

The Double Mer Formation and the Lake Melville Rift System, eastern Labrador; Can. J. Earth Sci., vol. 23, p. 359-368, 1986.

Geology of the Double Mer White Hills and surrounding regions, Grenville Province, eastern Labrador; Geol. Surv. Can., Paper 86-15, 1986.

Age and evolution of the Grenville Province in eastern Labrador from U-Pb systematics in accessory minerals; Contrib. Mineral. Petrol. Scharer, vol. 5, 1986.

Geology of the Port Hope Simpson map region, Grenville Province, eastern Labrador; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987

Proterozoic evolution of the Grenville Province and adjacent Makkovik Province in eastern-central Labrador; Geol. Assoc.

Can., Sp. Paper 31, p. 281-296, 1986.

The Grenville Front on the Labrador coast; ibid, p. 95-106, 1986.

The northeastern Grenville Province: new insights; ibid., p. 13-29, 1986.

Batteau 1:100 000 geological map: Newfoundland Dept. Mines and Energy, Map 86-75, 1986.

Paradise River 1:100 000 geological map; ibid., Map 86-73, 1986.

Sand Hill River 1:100 000 geological map; ibid., Map 87-74, 1986.

Since the start of the project 47 1:50 000 sheets having been mapped, involving 17 geologist-field seasons work. 1987 will be the last field season prior to a major and prolonged phase of synthesis and writing-up.

34. NUNN, G.A.G., Newfoundland Dept. Mines and Energy:
Geology of the Atikonak lake area, Grenville Province, western Labrador, 1982-.

Structure and tectonic history of part of the Grenville Province in Labrador. Data processing in progress.

35. NUNN, G.A.G., CONNELLY, J.N., EMSLIE, R.F., Newfoundland Dept. Mines and Energy, Memorial Univ. (Earth Sciences), Geol. Surv. Can.:
Western Grenville project, Labrador, 1985-; Ph.D. thesis (Connelly).

To elucidate the structure, age, tectonic history and mineral potential of polyorogenic, high-grade gneiss terranes within the Grenville Province of western Labrador.

36. NUNN, G.A.G., NOEL, N., Newfoundland Dept. Mines and Energy, Memorial Univ. (Earth Sciences):
Regional geology east of Michikamau Lake, central Labrador, 1980-; M.Sc. thesis (Noel).

Stratigraphy, structure, mineral potential and geodynamic evolution of area. Final map and report nearing completion.

37. O'BRIEN, S.J., KNIGHT, I., Newfoundland Dept., Mines and Energy:
Geology of Avalonian rocks in the Bonavisty Bay region, Newfoundland, 1986-89.

See:

Geology of the Eastport (west half) map area, Newfoundland; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

To elucidate tectonic and depositional history of late PC rocks of the Avalon Zone near and adjacent to Dover Fault in northeast Newfoundland, and to produce 1:50 K maps of NTS areas 2C-12, 2C-13.

38. O'NEILL, P., Newfoundland Dept. Mines and Energy:
Weir Pond area, Newfoundland.

See:

Geology of the Weir's Pond (2E/1) map area, northeastern Newfoundland; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

Geological mapping of the west half of the sheet completed in 1986; east half to be mapped in 1987.

39. RYAN, B., LEE, D., CORRIVEAU, L., Newfoundland Dept. Mines and Energy, Univ. Toronto (Geology):
A transect of the Nain-Churchill Boundary and plutonic rocks between Nain and Strange Lake, Labrador (NTS 14D/south half), 1985-89.

See:

Geology of the eastern Churchill Province (Orogen) between Anaktalik Brook and Cabot Lake (NTS 14D/2, 6, 7), Labrador; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

The discovery of "high-tech" elements at Strange Lake by Iron Ore Company in late 1979 led to the recognition of peralkaline rocks among the granites of north-central Labrador. One object of the project is to survey for similar economically interesting targets. To date approximately two-thirds of the project corridor has been surveyed.

40. WARDLE, R.J., KROGH, T.E., Newfoundland Dept. Mines and Energy; Royal Ontario Museum:
Regional geology of the Goose Bay area, Grenville Province, Labrador, 1985-.

See:

The eastern Grenville Province: new insights; Geol. Assoc. Can., Sp. Paper 31, p. 15-29, 1986.

Geology of the Travespine-McKenzie rivers area; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

The project in 1987 is in its final year of field work and should involve the completion of regional mapping in NTS sheets 13F/3, 4, 5 and 6. Field work is being coordinated with U -Pb isotopic dating at the Royal Ontario Museum.

NORTHWEST TERRITORIES/ TERRITOIRES DU NORD-OUEST

41. ASPLER, L., Indian Affairs and Northern Development (NAP) Canada:
Nonacho Basin, (mapping outliers), N.W.T., 1987.

Mapping of extensions of the Nonacho Group and collection of materials for heavy mineral analysis and gold content.

42. ATKINSON, D., FYFE, W.S., Indian Affairs and Northern Development (NAP) Canada, Univ. Western Ontario (Geology):
Western Plutonic Complex, 1986-; Ph.D. thesis (Atkinson)

Mapping of granitoids along the west side of the Yellowknife volcanic belt to investigate the granitoid/gold connection scale 1:50 000.

43. BROPHY, J.A., Indian Affairs and Northern Development (NAP) Canada:
Geology of the Lower Crestarum Formation, 1986-.

See:

Geology of the Lower Crestarum Formation in the Fred Henne park area, NTS 85J/8, NWT; DIAND, EGS 1986-13.

44. CULLEN, R., FYSON, W.K., Indian Affairs and Northern Development (NAP) Canada, Carleton Univ. (Geology):
Cameron River volcanic belt 85I/15, N.W.T., 1987-; M.Sc. thesis (Cullen).

See:

Geology of Fenton Lake area, part of Cameron River volcanic belt, NWT; DIAND, EGS 1986-10.

Mapping to elucidate structure and stratigraphy of this area and adjacent parts of the Slave Province.

45. GAULT, C.D., WAHLROTH, J.H., Indian Affairs and Northern Development (NAP) Canada:
Geology of the northeastern Outpost Islands, N.W.T., 1986.

See:

Geology of the northeastern Outpost Islands, East Arm of Great Slave Lake, parts of NTS 85H/13, NWT; DIAND EGS 1986-9.

46. HENDERSON, J.B., Geol. Surv. Can.:
Keskarrah Bay map-area, District of Mackenzie, 1976-.

47. HOFFMAN, P.F., Geol. Surv. Can.:
East Arm of Great Slave Lake, District of Mackenzie, 1966-.

48. JACKSON, V.A., BAILEY, G.B., BELL, R.H., BISHOP, D., CRUX, J.C.E., DANIELS, A., HOWSEN, D., KERR, D., MANICOTTI, C., RELF, C., TREGANZA, M., WAHLROTH, J.M., Indian Affairs and Northern Development (NAP) Canada:
Geology of the Quyta Lake ara, N.W.T.

See:

Geology of the Quyta Lake area, parts of 85J/9, 16, NWT; DIAND, EGS 1986-2.

49. JACKSON, V.A., BELL, R.M., BISHOP, S., DANIELS, A., HOWSON, S.H., KERR, D.E., TREGANZA, M., Indian Affairs and Northern Development (NAP) Canada:
Preliminary geology of the eastern Hepburn Island area, N.W.T., 1986-.

See:

Preliminary geology of the eastern Hepburn Island area, NTS 76M/1, 2, 8, 9, 15, 16, NWT; DIAND, EGS 1986-6.

50. JAMES, D.T., DIXON, J.M., CARMICHAEL, D.M., Queen's Univ. (Geological Sciences):
A transect across part of the Slave-Churchill Boundary in the Moraine Lake area, N.W.T., 1983-88; Ph.D. thesis (James).

To map the geology on either side of the Slave-Churchill boundary and to discuss the significance of the structural and metamorphic variations observed across this boundary.

51. KERR, D.R., Indian Affairs and Northern Development (NAP) Canada, Univ. Alberta (Geology):
Surficial mapping, northwestern District of Mackenzie, N.W.T.

See:

Russell Lake and Hood River areas and end-glacial marine sediments of the Arctic coast (Paulatuk to Spence Bay), NWT; DIAND, EGS 1986-11 and EGS 1986-14.

52. MATTNER, J., Indian Affairs and Northern Development (NAP) Canada, Technische Universitat Clausthal:
Geology, geomorphology and geocryology of the McDougall Pass area, 1986; M.Sc. thesis.

See:

Geology, geomorphology and geocryology of the McDougall Pass area, Richardson Mountains, NWT and Yukon, parts of NTS 116P/9, 10, 16, NWT; DIAND, EGS 1986-7, 1986.

53. PELLETIER, K., WAHLROTH, J.M., Indian Affairs and Northern Development (NAP) Canada:
Octopus Formation, 85J/7, 8, N.W.T., 1986-.

See:

Geology of southwestern Yellowknife Bay area map, scale 1:10 000, NWT; DIAND, EGS 1986-12.

Completion of mapping of south end of Yellowknife volcanic belt.

54. RELF, C., NICHOLSON, D.C., Memorial Univ. (Earth Sciences):
Geology of East Mirage Islands, N.W.T., 1986.

See:

Geology of the East Mirage Islands, NWT, parts of NTS 85J/6, 8, NWT; DIAND, EGS 1986-15.

55. RELF, C., NICOLSON, D.C., RIVERS, T., Memorial Univ. (Earth Sciences):
Geology of the West Mirage Islands, NWT., 1986; M.Sc. thesis (Relf).

See:

Geology of the West Mirage Islands, NWT parts of NTS 85J/7,8, NWT; DIAND, EGS 1986-5.

Field work began in 1984, completed 1985.

56. ROACH, D., FYSON, W.K., Indian Affairs and Northern Development (NAP) Canada, Univ. Ottawa (Geology):
Jackfish Island 85J/1,8, N.W.T.

Mapping of Yellowknife Bay area, southeast end of Yellowknife volcanic belt, scale 1:20 000. Map in preparation for 1987 open file release.

57. SEATON, J.B., Indian Affairs and Northern Development (NAP) Canada:
Ingraham Trail 85 I, J., N.W.T., 1986-.

Geological mapping at a scale of 1:10 000, in the Tibbett Lake area.

58. THORSTEINSSON, R., Geol. Surv. Can.:
Cornwallis and adjacent smaller islands, District of Franklin, 1965-.

NOVA SCOTIA/NOUVELLE-ÉCOSSE

59. BARR, S.M., Acadia Univ. (Geology):
The Fourchu Group and associated granitoid rocks in southeastern Cape Breton Island, Nova Scotia, 1987-89.

Includes completion of the remapping of Late Precambrian rocks in southeastern Cape Breton Island which has been carried out by M.Sc. students at Acadia University, and compilation of petrologic data to provide a comprehensive interpretation of tectonic setting and economic potential of this region.

60. RAESIDE, R.P., BARR, S.M., Acadia Univ. (Geology):
Cape Breton Highlands mapping project, Nova Scotia, 1983-87.

See:

Grenvillian basement in the northern Cape Breton Highlands, Nova Scotia; Can. J. Earth Sci., vol. 24, 1987.

Tectonostratigraphic subdivisions of Cape Breton Island, Nova Scota; Maritime Sediments and Atlantic Geology, vol. 22, p. 252-263, 1986.

Geological mapping has been completed in the northern, central and eastern Cape Breton Highlands, four tectonostratigraphic zones recognized, and plutonic and deformational history ranging from Grenvillian to Carboniferous documented.

ONTARIO

61. ARMSTRONG, D.K., JOHNSON, M.D., Ontario Geol. Surv.:
Geological mapping Bruce Peninsula, Ontario, scale 1:50 000, 1987-89.

62. BEAKHOUSE, G.P. Ontario Geol. Surv.:
Precambrian geology of the Birch Lake area, Ontario

63. BORN, P., Ontario Geol. Surv.:
Geology of Cassels and Riddell townships, District of Nipissing, Ontario, 1986.

See:

Ontario Geol. Surv., Misc. Paper 132, 1986.

Area underlain mainly by Proterozoic sedimentary rocks of the Gowganda and Lorrain formations (Cobalt Group), and Nipissing diabase rocks. A small part of the area contain Archean mafic to felsic metavolcanic which are the northeast extension of the Temagami greenstone belt.

64. EASTON, R.M., Ontario Geol. Surv.:
Mapping of the Minden area (NTS 31D/15), Grenville Structural Province (1:15 840), Ontario, 1983-86.

See:

Anson area, Haliburton and Victoria Counties and Muskoka District; Ontario Geol. Surv., Misc. Paper 132, p. 136-140, 1986.

Precambrian geology of the Lochlin area; Ontario Geological Surv., Prel. Map P.3071, 1987

Precambrian geology of the Anson area; Ontario Geol. Surv., Prel. Map P.3066, 1987.

Mapping of NTS 31D/15 completed in September 1986, final reports in preparation, 1:50 000 scale map of area in preparation.

65. GOOD, D.J., Ontario Geol. Surv.:
Precambrian geology of the Birch Lake area (eastern half), Ontario, 1985-87.

See:

Geology of the Birch Lake area (northeast sheet), District of Kenora, Patricia Portion; Ontario Geol. Surv., Misc. Paper 132., 1986.

66. KRESZ, D., ZAYACHIVSKY, B., Ontario Geol. Surv.:
Geology of Pifher, Meader and Barbara Townships, Beardmore area, northwestern Ontario, 1986-87.

67. SAGE, R.P., Ontario Geol. Surv.:
Josephine Extension, 1987.

QUÉBEC

68. BEULLAC, R., IMREH, L., Ministère de l'Énergie et des Ressources du Québec:
Cartographie géologique du secteur Preissac-LaPause-Cléricy, Québec, 1975-86.

Voir:

Géologie du secteur Preissac-LaPause-Cléricy (Abitibi, Québec); Ministère de l'Énergie et des Ressources du Québec, ET86-03, 1986.

69. DANIS, D., BÉLANGER, M., Ministère de l'Énergie et des Ressources du Québec:
Région du lac Raude, Nouveau-Québec, 1986-87.

Voir:

Géologie de la région du lac Raude, Nouveau-Québec; Ministère de l'Énergie et des Ressources du Québec, DP87-07, 1987.

Reconnaissance géologique et évaluation préliminaire du potentiel minéral du territoire à l'est de la Fosse du Labrador. Ce travail fait partie d'un projet à long terme qui a débuté en 1983.

70. DUBOIS, J-M.M., Université de Sherbrooke (Géographie):
Géologie du Quaternaire de la Côte Nord du Saint-Laurent, 1974-88.

Voir:

Cartes des matériaux d'emprunt et des zones de la Moyenne Côte Nord du Saint-Laurent; Dépt. de géographie, Université de Sherbrooke, Bull. de rech. no 92-93, 1986.

Les travaux de terrain sont complétés; un rapport géologique est en cours.

71. DUPUY, H., HOGARTH, D.W., Ministère de l'Énergie et des Ressources du Québec, Université Ottawa (Géologie):
Géologie de la région de Wakefield-Cascades, Québec, 1986-88; thèse de maîtrise (Dupuy).

Cartographie à l'échelle 1:10 000 de la région de Wakefield-Cascades (Outaouais) en vue de préciser les contextes stratigraphique et structural des occurrences minérales. Etude détaillée des gîtes et indices les plus prometteurs.

72. HOCQ, M., Ministère de l'Énergie et des Ressources du Québec:
Revision de la carte géologique de l'Abitibi (Secteur Ouest Rouyn-Matagami), Québec.

73. IMREH, L., Ministère de l'Énergie et des Ressources du Québec:
Cartographie de surface de la mine Lamaque, Val d'Or, Abitibi, Québec, 1986.

Voir:

Mine Lamaque, géologie de surface; Ministère de l'Énergie et des Ressources du Québec, ET87-04, 1986.

Mise en évidence des cycles volcaniques basalte-andésite-dacite sur la propriété minière. Définition du contexte géologique réel dudit secteur.

74. INDARES, A., MARTIGNOLE, J., KISH, L., IREM-MERI, Ministère de l'Énergie et des Ressources du Québec:
Région du lac Ruffin, Moyenne-Côte-Nord, Québec, 1986-87.

Voir:

Région du lac Ruffin, Moyenne-Côte-Nord; Ministère de l'Énergie et des Ressources du Québec, DP 87-08, 1987.

Une connaissance du contexte lithostratigraphique et tectonique du Groupe de Wakeham; relations avec le soubassement; corrélations régionales.

75. LAPOINTE, B., BÉLANGER, M., Ministère de l'Énergie et des Ressources du Québec:
Géologie de la région du lac Lilois, Nouveau-Québec, 1986-87.

Voir:

Reconnaissance géologique de la région du lac Lilois; Ministère de l'Énergie et des Ressources du Québec, DP 87-02, 1987.

Une reconnaissance geologique régionale; une évaluation du potentiel minéral, surtout aurifère, de la région.

76. MOORHEAD, J., LAMOTHE, D., Ministère de l'Énergie et des Ressources du Québec:
Région du lac Hubert, Nouveau-Québec, 1986-87.

Voir:

Géologie de la région du lac Hubert, Fosse de l'Ungava; Ministère de l'Énergie et des Ressources du Québec, DP 86-31, 1986.

Reconnaissance géologique et évaluation préliminaire du potentiel minéral de la Fosse de l'Ungave (ceinture de Cap-Smith). Ce travail fait partie d'un projet à long terme qui a débuté en 1983.

77. SIMARD, S., Ministère de l'Énergie et des Ressources du Québec:
Géologie de la région du lac DeMaurès, partie orientale de la Bande Frotet-Evans, Québec, 1983-87.

78. TANER, M.F., BÉLANGER, M., Ministère de l'Énergie et des Ressources du Québec:
Région du lac Juillet, Nouveau-Québec, 1986-87.

Voir:

Reconnaissance géologique de la région du lac Juillet, Nouveau-Québec; Ministère de l'Énergie et des Ressources du Québec, DP 87-11, 1987.

79. TREMBLAY, G., LAMOTHE, D., Ministère de l'Énergie et des Ressources du Québec:
Région du lac Lessard, Nouveau-Québec, 1986-87.

Voir:

Géologie de la région du lac Lessard, Fosse du l'Ungava; Ministère de l'Énergie et des Ressources du Québec, DP 86-30, 1986.

Reconnaissance géologique et évaluation préliminaire du potentiel minéral de la Fosse de l'Ungave (ceinture de Cap-Smith). Ce travail fait partie d'un projet à long terme qui a débuté en 1983.

SASKATCHEWAN/SASKATCHEWAN

80. DELANEY, G., Saskatchewan Geol. Surv.:
Bedrock geological mapping, Laonil Lake area, northeastern Saskatchewan, 1986-89.

See:

Bedrock geological mapping, Laonil Lake area (part of NTS 63M-11 and -12); Saskatchewan Geol. Surv., Misc. Rept. 86-4, p. 32-41, 1986.

The Laonil Lake area, A key window on the enigmatic Glenie Lake Domain, Trans-Hudson Orogen; GAC-MAC Annual Meeting, vol. 12, Program with abstracts, 1987.

To geologically map the area around Laonil Lake at 1:20 000 scale in order to establish the detailed geological setting of gold and other mineral occurrences.

81. GILBOY, C.F., Saskatchewan Geol. Surv.:
Sub-Athabasca basement geology, northern Saskatchewan, 1981-87.

A 1:1 000 000 compilation map of the basement geology beneath Athabasca Group sedimentary rocks is accompanied by 70 geochemical analyses (major oxides and selected trace elements) of freshest-available specimens representing most of the major mappable rock units.

82. HARPER, C., Saskatchewan Geol. Surv.:
Gold belt geology: Windrum Lake area, 1984-87.

See:

Geology and petrochemistry of the Star-Waddy Lakes area, Saskatchewan; CIM Sp. Vol. 38, p. 57-58, 1986.

Geological setting of gold mineralization in the Star-Waddy Lakes area; Gold '86: An Internat. Symp. on the Geology of Gold Deposits, Toronto, Poster Paper Abstracts, p. 64-66, 1986.

Bedrock geological mapping, Windrum Lake area; Saskatchewan Geol. Surv., Misc. Rep. 86-4, p. 8-18, 1986.

1:20 000 scale geological mapping of the northern part of the Central Metavolcanic Belt between Waddy and Star Lakes has been completed. Petrographic studies and scrutiny of geochemical data continuing. Compilation at 1:50 000 to be completed for release in November, 1987.

83. SLIMMON, W.L., Saskatchewan Geol. Surv.:
Gold belt geology, 1986-87.

See:

Bedrock geological mapping, Hebden Lake area (part of NTS 73P-7); Saskatchewan Geol. Surv., Misc. Rep. 86-4, p. 42-47, 1986.

The study establishes a regional geological setting with respect to the many areas of gold mineralization in the area.

84. THOMAS, D.J., Saskatchewan Geological Survey:
Bedrock geological mapping, Esmay Lake area, Saskatchewan, 1984-89.

See:

Geological and petrochemistry of the Star-Waddy Lakes area; CIM Sp. Vol. 38, 1986.

The Star Lake Pluton and associated gold mineralization; Saskatchewan Geol. Soc., Sp. Volume No. 8, 1986.

To geologically map southern portion of Central Metavolcanic Belt, La Ronge Domain at 1:20 000 scale and establish geological setting of gold and base metal mineralization.

YUKON TERRITORY/ TERRITOIRE DU YUKON

85. CAMPBELL, R.B., Geol. Surv. Can.:
Operation Mount St. Elias, Yukon-British Columbia, 1973-.

86. THOMPSON, R.I., Geol. Surv. Can.:
Stratigraphy and structure of Dawson, Larsen Creek and Nash Creek map-areas, Yukon Territory, 1980-.

BRITISH COLUMBIA/ COLOMBIE-BRITANNIQUE

87. GABRIELSE, H., Geol. Surv. Can.:
Operation Finlay, British Columbia, 1970-.

88. GRABIELSE, H., Geol. Surv. Can.:
Operation Dease, British Columbia, 1977-.

See:

"Antler" clastics in the Canadian Cordillera; Geology, vol. 15, no. 2, p. 103-107, 1987.

The Upper Triassic Kutcho Formation Cassiar Mountains, north-central British Columbia; Geol. Surv. Can., Paper 86-16, 1986.

89. McMECHAN, M.E., Geol. Surv. Can.:
Geological mapping in the southern Canadian Rocky Mountains, 1985-.

90. MONGER, J.W.H., Geol. Surv. Can.:
Geology of the Ashcroft and Hope map-areas, British Columbia, 1980-.

See:

Geology between Harrison Lake and Fraser River, Hope map area, southwestern British Columbia; Geol. Surv. Can., Paper 86-1B, p. 699-706, 1986.

91. REESOR, J.E., Geol. Surv. Can.:
Geology of Nelson map area (E/2), British Columbia, 1979-.

92. RODDICK, J.A., Geol. Surv. Can.:
Coast Mountains project, British Columbia, 1963-.

93. WHEELER, J.O., Geol. Surv. Can.:
Lardeau map-area, British Columbia, 1979-.

94. WOODSWORTH, G.J., Geol. Surv. Can.:
Kemano project, British Columbia, 1977-.

MANITOBA/MANITOBA

95. CORKERY, M.T., LENTON, P.G., Manitoba Energy and Mines (Geol. Services):
Lower Churchill River project, 1979-.

Final report and nine maps ranging from 1:100 000 to 1:250 000 compilation curently under development.

96. McGREGOR, C.R., Manitoba Energy and Mines (Geol. Services):
Subsurface Precambrian of southwestern Manitoba and of Hudson Bay Lowlands, 1983-.

See:

Subsurface Precambrian of southwestern Manitoba; Manitoba Energy and Mines, Prel. Map C-1, 1986.

Subsurface Precambrian of Hudson Bay Lowlands map will be completed by November, 1987.

97. McGREGOR, C.R., Manitoba Energy and Mines (Geol. Services):
Subsurface Precambrian of southeastern Manitoba (52E, 62H, 62I), 1984-.

See:

Subsurface Precambrian geology of southeastern Manitoba south of 49°30'; Manitoba Energy and Mines, Ann. Rept. Field Activities, p. 139-140, 1986.

The subsurface Precambrian is being compiled and interpreted along with the compilation of surficial Precambrian geology (particularly 52E) being done by Dorne Kowerchuk (of Geological Services).

98. SCHLEDEWITZ, D.C.P., Manitoba Energy and Mines (Geol. Services):
Brocket-Big Sand Lake, Manitoba, 1981-.

Final report and maps two 1:250 000 and two maps at 1:50 000 are currently under progress.

NEWFOUNDLAND/LABRADOR/ TERRE-NEUVE/LABRADOR

99. ERMANOVICS, I.F., Geol. Surv. Can.:
Archean rocks of the Nain Province in Hopedale (13N), Snegamook Lake (13K), and Makkovik (13O) map-areas, Labrador, 1978-.

100. van BERKEL, J.T., Geol. Surv. Can.:
Geology of the southern Long Range, Newfoundland, 1986-.

See:

A preliminary report on the geology of the southern Long Range, southwest Newfoundland; Geol. Surv. Can., Paper 86-1B, p. 157-170, 1986.

Geology of the Dashwoods Pond, St. Fintan's and Main Gut map areas, southwest Newfoundland; Geol. Surv. Can., Paper 87-1A, p. 399-408, 1987.

NORTHWEST TERRITORIES/ TERRITOIRES DU NORD-OUEST

101. BOSTOCK, H.H., Geol. Surv. Can.:
Geology of Fort Smith, District of Mackenzie, 1980-.

102. BOSTOCK, H.H., Geol. Surv. Can.:
Geology, Taltston Lake and Fort Resolution (86H) map-areas, District of Mackenzie, 1985-.

See:

Geology of the south half of the Taltston Lake map area, District of Mackenzie; Geol. Surv. Can., Paper 87-1A, p. 443-450, 1987.

103. CECILE, M.P., Geol. Surv. Can.:
Stratigraphic and structural analysis of Late Paleozoic strata in the northern Mackenzie and Selwyn Mountains, 1985-.

104. CIESIELSKI, A., Geol. Surv. Can.:
Gneissic basement to the Fury and Hecla Formation and the Autridge Formation on Baffin Island, District of Franklin, 1979-.

105. FRASER J.A., Geol. Surv. Can.:
Geology of Woodburn Lake map area, District of Keewatin, 1980-.

106. FRISCH, T., Geol. Surv. Can.:
Precambrian geology of southeast Ellesmere, Devon and Cobourg Islands, District of Franklin, 1976-.

107. FRISCH, T., Geol. Surv. Can.:
Geology of Montresor River and lower Hayes River map areas, District of Keewatin, 1982-.

108. FRISCH, T., Geol. Surv. Can.:
Precambrian Shield of the central Boothia Uplift, District of Franklin, 1986-.

See:

Precambrian Shield of Boothia Uplift, southern Somerset Island and northern Boothia Peninsula, District of Franklin; Geol. Surv. Can., Paper 87-1A,, p. 429-434, 1987.

109. FRITH, R.A., Geol. Surv. Can.:
Geology of Indin Lake (86B) map-area, District of Mackenzie, 1972-.

110. FRITH, R.A., Geol. Surv. Can.:
Geology of Beechey-Duggan Lakes area, District of Mackenzie, 1980-.

111 HENDERSON, J.B., Geol. Surv. Can.:
Healey Lake map-area, District of Mackenzie, 1978-.

See:

U-Pb zircon and monazite geochronology and zircon morphology of granulites and granite from the Thelon Tectonic Zone, Healey Lake and Artillery Lake map areas, N.W.T.; Geol. Surv. Can., Paper 87-1A, p. 783-801, 1987.

112. HENDERSON, J.B., Geol. Surv. Can.:
Artillery Lake map area, District of Mackenzie, 1984-.

See:

An integrated geological, gravity and magnetic study of the Artillery Lake area and the Thelon Tectonic Zone, District of Mackenzie; Geol. Surv. Can., Paper 87-1A, p. 803-814, 1987.

113. HENDERSON, J.R., Geol. Surv. Can.:
Geology of the Wager Bay "Shear Zone", District of Keewatin, 1985-.

114. JACKSON, G.D., Geol. Surv. Can.:
Operation Bylot, District of Franklin, 1967-.

115. JACKSON, G.D., Geol. Surv. Can.:
Operation Penny Highlands, District of Franklin, 1969-.

116. LeCHEMINANT, A.N., Geol. Surv. Can.:
Macquoid Lake (W1/2), Thirty Mile and Tebesjuak Lake map-areas, District of Keewatin, 1978-.

117. LeCHEMINANT, A.N., Geol. Surv. Can.:
Geology of Aberdeen Lake and parts of adjoining map areas, District of Keewatin, 1982-.

See:

Geology and U-Pb ages of early Proterozoic calcalkaline plutons northwest of Wager Bay, District of Keewatin; Geol. Surv. Can., Paper 87-1A, p. 773-782, 1987.

118. OKULITCH, A.V., Geol. Surv. Can.:
Geology of the Arctic Islands, 1984-.

119. SCHAU, M., Geol. Surv. Can.:
Geology of the Baker Lake map-area, District of Keewatin, 1980-.

See:

Occurrence and possible tectonic significance of high-pressure granulite fragments in the Tulemalu fault zone, District of Keewatin, N.W.T.; Can. J. Earth Sci., vol. 23, no. 12, p. 1950-1962, 1986.

120. TELLA, S., Geol. Surv. Can.:
Kamilukauk Lake map-area, District of Keewatin, 1979-.

121. TELLA, S., Geol. Surv. Can.:
Deep Rose Lake and parts of adjoining map areas, District of Keewatin, 1982-.

122. TELLA S., Geol. Surv. Can.:
Chesterfield Inlet (550), and parts of Tavani (55K/9, 16) and Marble Island (55J/13, 14) map areas, District of Keewatin, 1985-.

See:

Precambrian geology of parts of Chesterfield Inlet map area, District of Keewatin; Geol. Surv. Can., Paper 87-1A, p. 25-36, 1987.

123. THOMPSON, P.H., Geol. Surv. Can.:
Tinney Hills (76J) – Overby Lake (76IW1/2) map areas, District of Mackenzie, 1983-.

124. THORSTEINSSON, R., Geol. Surv. Can.:
Baumann Fold (49C), Vendom Fiord (49D) and Strathcona Fiord (49E), District of Franklin, 1986-.

125. TRETTIN, H.P., Geol. Surv. Can.:

Completion of reconnaissance geology, northern Ellesmere Island, District of Franklin, 1973-.

See:

Pearya: a composite terrane with Caledonian affinities in northern Ellesmere Island; Can. J. Earth Sci., vol. 24, no. 2, p. 224-245, 1987.

U-Pb age determinations on Proterozoic to Devonian rocks from northern Ellesmere Island, Arctic Canada; ibid., p. 246-256, 1987.

Late Cretaceous bimodal magmatism, northern Ellesmere Island: isotopic age and origin; ibid., p. 257-265, 1987.

ONTARIO/ONTARIO

126. CARTER, M.W., THURSTON, P.C., Ontario Geol. Surv.:
Blackwell and Laurie townships, Ontario, 1986-87.

See:

Blackwell and Laurie townships, District of Thunder Bay; Ontario Geol. Surv., Misc. Paper 132, p. 85-89, 1986.

The consolidated rocks of the map area consists of a sequence of komatiitic to alkalic (shoshonitic) metavolcanic rocks interlayered with metasediments and intruded by granitic and gabbroic rocks. A later suite of rocks consists of unconformable metasediments and shoshonitic metavolcanics which comprise the Timiskaming sequence.

127. MARMONT, S., Ontario Geol. Surv.:
Regional mapping of the Detour Lake greenstone belt, Ontario, 1987-89.

128. PERCIVAL, J.A., Geol. Surv. Can.:
Geology of the Chapleau and Groundhog River blocks, Ontario, 1986-.

QUÉBEC

129. CIESIELSKI, A., Geol. Surv. Can.:
Metamorphism and structure in northeast Superior Province, Québec, 1980-.

130. CIESIELSKI, A., Geol. Surv. Can.:

Études des roches Archéennes et Protérozoiques dans la région du Front de Grenville entre Chibougamau et Val d'Or, Québec, 1984-.

Voir:

Le Front de Grenville dans la région de Chibougamau (Québec); Geol. Surv. Can., Paper 85-1B, p. 303-317, 1985.

131. DUBOIS, J.-M.M., GWYN, Q.H.J., Université de Sherbrooke (Géographie):
Le Quaternaire de l'île d'Anticosti, Quebec, 1979-87.

Voir:

L'île d'Anticosti a-t-elle été englacée?; GEOS, vol. 15, no. 1, p. 21-23, 1986.

More than 85 000 years of sea-level fluctuations in Eastern Canada; Symp. Sea-level changes and Appl., IGCP-200, Qingdao, China, Abstracts, p. 38, 1986.

Les travaux de terrain et la cartographie préliminaire est terminée.

132. KETTLES, I.M., Geol. Surv. Can.: Surficial maping in Fort Coulonge area, Quebec, 1986-.

133. LACROIX, S., SIMARD, A., HOCH, M., Ministère de l'Énergie et des Ressources du Québec: Projet Harricana-Grasset, Québec, 1985-88.

Voir:

La région de Casa-Bérardi: Synthèse géologique et métallogénique préliminaire; Ministère de l'Énergie et des Ressources du Québec, MB86-65, 1986.

Géologie de la région Harricana-Grasset: demie-est; ibid., DP86-22, 1986.

Objectifs: Cartographie et synthèse géologique-géo-chimique-géophysique de la bande Matagami-Casa-Bérardi. Etat d'avancement: Les "2/3 est" de la bande ont été cartographiés — les travaux géochimiques et de synthèse géophysique présentement en cours feront l'objet des prochains raports.

134. PERCIVAL, J.A., Geol. Surv. Can.: Geology of the Ashuanipi Granulite Complex in the Schefferville area, Quebec-Newfoundland, 1986-.

YUKON TERRITORY/ TERRITOIRE DU YUKON

135. GORDEY, S.P., Geol. Surv. Can.: Geology of Nahanni map-area, Yukon and Northwest Territories, 1979-.

See:

"Antler" clastics in the Canadian Cordillera; Geology, vol. 15, no. 5, p. 103-107, 1987.

136. GORDEY, S.P., Geol. Surv. Can.: Geology of Sheldon Lake (105J) and Tay River (105K) map area, east-central Yukon, 1982-.

See:

Bimodel Paleogene volcanics near Tintina Fault east-central Yukon, and their possible relationship to placer gold; Indian Northern Affairs Canada, Yukon Geology, vol. 1, p. 139-147, 1986(1987).

ENVIRONMENTAL GEOSCIENCE/SCIENCES DE LA TERRE APPLIQUÉES À L'ENVIRONNEMENT

137. ALIKHAN, M.A., BAGATTO, G., ZIA, S., PANI, A.K., Laurentian Univ. (CIMMER): Aquatic crustacean species as tools for biogeochemical prospecting, 1986-.

See:

Copper, cadmium and nickel accumulation in crayfish populations near copper-nickel smelters at Sudbury, Ontario, Canada; Bull. Environ. Contam. Toxicol., vol. 38, p. 540-545, 1987.

Zinc, iron, manganese and magnesium accumulation in crayfish populations near copper-nickel smelters at Sudbury, Ontario, Canada; ibid., vol. 38, no. 6, 1987.

Mean concentrations of Cu, Cd, Fe, Mn, Mg and Ni in whole crayfish are positively correlated with levels in the aquatic environment (both water and sediments) in a wide range of contaminated and uncontaminated sites. This would sugest that crayfish is a reliable indicator of the presence of metals in the aquatic environment.

138. BIGRAS, S.C., Environment Canada (National Hydrology Res. Instit.): Lake regimes, Mackenzie Delta, Northwest Territories, 1980-85.

Studies at three sites in the Mackenzie Delta have included a) the importance of backwater flooding from ice jams, b) processes of in-flow, out-flow and evaporation, c) hydrometeorological conditions and d) physiography. If water levels and flooding are reduced, high-perched lakes will dry up and the land/water ratio would increase.

139. EGGINTON, P.A., Geol. Surv. Can.: Relationship of flood frequency and heavy metal uptake in growth rings of trees, 1981-.

140. EGGINTON, P.A., Geol. Surv. Can.: Periglacial processes, Canadian arctic, 1983-.

141. FOGARASI, S., NICHOLAICHUK, W., Environment Canada (National Hydrology Res. Instit.): Technology transfer — evaporation and evapotranspiration, 1985-.

To analyze climatic data files related to evaporation variation due to land use changes-to advise clients on the use of the WREVAP program.

142. FOGARASI, S., O'BRIAN, T., WHEATON, E., LAWFORD, R., Environment Canada (National Hydrology Res. Instit.): Synoptic control of persistent droughts on the Canadian Prairies, 1987-88.

To define the concept of hydrologic and meteorologic drought for the Canadian Prairies' to construct drought calendar and comparing it with existing drought indices and evaluating the applicability of various indices; to determine the influence of large scale weather patterns on persistent droughts.

143. KETTLES, I.M., Geol. Surv. Can.: Sensitivity of surficial sediments to effects of acid precipitation, 1980-.

144. LEVINSON, A.A., Univ. Calgary (Geology and Geophysics): Environmental geochemistry, 1976-.

See:

Further stable isotope investigations of human urinary stones: comparison with other body components; Applied Geochemistry, vol. 2, no. 2, 1987.

I am attempting to relate the occurrence and formation of human urinary stones with environmental geochemical parameters by means of the study of trace elements and stable isotopes.

145. MARSH, P., Environment Canada (National Hydrology Res. Instit.): Water temperature and heat flux in ice-covered rivers, 1983-87.

Detailed measurements of water temperature have been made in the ice-covered Liard River, Northwest Territories. The energy sources controlling water temperature have been measured and simulated, and convective heat flux to the base of the ice cover has been determined.

146. MARSH, P., Environment Canada (National Hydrology Res. Instit.): Snow-soil interactions in a permafrost environment, 1986-88.

See:

Factors limiting snowmelt runoff in a permafrost environment; Proc. 55th Ann. Western Snow Conf., Vancouver, British Columbia, 1987.

This project will concentrate on the interaction of snow-melt water with frozen soils in a permafrost environment. This includes soil heat flux, soil infiltration and the formation of basal ice. This research is required to improve our ability to model run-off in permafrost environments.

147. MARSH, P., FERGUSON, M., Environment Canada (National Hydrology Res. Instit.): Hydrologic studies, Mackenzie Delta lakes, 1983-87; M.Sc. thesis (Ferguson).

See:

Modelling water levels for a lake in the Mackenzie Delta; Cold regions hydrology Symp., American Water Res. Assoc., Fairbanks, Alaska, p. 23-29, 1986.

To determine the relative importance of the processes controlling lake level and to determine the timing and duration of flooding for a variety of lake types and to develop a model to predict their levels; the work has implications for determining the effect of flow regulation in the Mackenzie Basin.

148. McCABE, H.R., SIMPSON, F., Manitoba Energy and Mines (Geol. Services), Univ. Windsor (Geology): Subsurface disposal of wastes in Manitoba, 1975-88.

To outline in as much detail as possible the geological factors essential to an evaluation of the subsurface disposal potential in various areas and formations. A second part will outline the history of the only toxic subsurface waste disposal system so far utilized in Manitoba – the Maples Field refinery waste disposal system – now abandoned.

149. MICHEL, F.A., Carleton Univ. (Geology): Isotope investigations of northern groundwaters, permafrost and related phenomena, 1982-.

See:

Isotope geochemistry of frost-blister ice, North Fork Pass, Yukon, Canada; Can. J. Earth Sci., vol. 23, p. 543-549, 1986.

Hydrogeology of the Central Mackenzie Valley; J. Hydrology, vol. 85, p. 379-405, 1986.

Stratigraphic, isotopic and mineralogical evidence for an early Holocene thaw unconformity at Mayo, Yukon; Can. J. Earth Sci., vol. 23, p. 794-803, 1986.

150. MICHEL, F.A., ALLEN, D., Carleton Univ. (Geology): A reconstruction of the permafrost regime in the Mackenzie Delta-Beaufort Sea region and its paleoclimatic implications, 1985; M.Sc. thesis (Allen).

The wide variation in the thickness and distribution of permafrost reflects, in part, differences in the subsurface delta lithologies and the complex past surface temperature history. Various surface temperature histories for the past 120 000 years will be modelled.

151. NICHOLAICHUK, W., FOGARASI, S., CHANG, C., DAVIS, F., Environment Canada (National Hydrology Res. Instit.), Agriculture Canada, Alberta Environment: Effect of land uses on evapotranspiration, 1986-87.

Evaluate the complementary relationship areal evapotranspiration model estimates for irrigated, dryland, cropped and grassland sites in southern Albera.

152. NICHOLAICHUK, W., GRAY, D.M., McCONKEY, B., Environment Canada (National Hydrology Res. Instit.), Univ. Saskatchewan, Agriculture Canada: Effect of snow management practices on surface runoff and groundwater recharge, 1986-87.

Snow and fertilizer management for continuous, zero-till spring wheat; Can. J. Plant Sci., vol. 66, no. 3, p. 535-551, 1986.

Snow and fertilizer management for spring wheat grown on zero till; Proc. Symp. Snow Management for Agriculture, Great Plains Agricultural Council Publ. no. 120, Univ. Nebraska, p. 375-399, 1986.

Snowmelt infiltration to uncracked, cracked and subsoiled frozen soils; ibid., p. 299-319, 1986.

Snow management practices for trapping snow in a Prairie environment; ibid., p. 477-499, 1986.

Benefit/cost ratios for snow management techniques in semi-arid climates; ibid., p. 613-656, 1986.

Hydrology research needs; In Rept. 20th Ann. Convention, Conservation and Development Assoc., p. 13-19, 1986.

Hydrology research opportunities in western Canada; CSAE Paper No. 86-306, Ann. Meeting, Can. Soc. Agricultural Engineers, 1986.

Soil moisture management; Proc. Tillage and Soil Conservation Symp., Agriculture Canada, p. 77-92, 1986.

Management of Prairie soils, a fragile resource; Proc. The Prairies and Canada, Roy. Soc. Can. Symp., 1987.

Snow trapping and moisutre infiltration enhancement; Proc. Symp. Moisture Management in Crop Production, Fifth Annual Western Provinces Conf., Rationalization of Soil and Water Research and Management, p. 73-84, 1986.

To examine the effects of snowmelt enchancement by tillage practices, meltwater enhancement in cracked soils, effect of tillage practices on surface runoff and groundwater recharge.

153. NICHOLAICHUK, W., GROVER, R., WHITING, J., Environment Canada (National Hydrology Res. Instit.), Agriculture Canada, Saskatchewan Res. Council: Irrigation return flow, 1986-87.

Determine the quantity and quality of drainage water from irrigation during a growing season and determine efficiency of use of herbicides, nutrients, pesticides and irrigation water.

154. PROWSE, T.D., DEMUTH, M., WATSON, S., Environment Canada (National Hydrology Res. Instit): River ice break-up and ice jamming, Mackenzie River Basin, Northwest Territories, 1982-; M.Sc. thesis (Watson).

See:

Ice jam characteristics, Liard-Mackenzie River confluence; Can. J. Civil Engineering, vol. 13, no. 6, p. 653-665, 1986.

Hydrothermal decay of ice jams; Proc. 42nd Annual Eastern Snow Conf., Montréal, Quebec, p. 272-276, 1986.

Physical characteristics of thermal and mechanical break-ups have been identified and an ice jam stage-discharge relationship defined for the Liard mouth using equilibrium jam theory. The importance of hydrothermal heat flow to jam decay has been established and an analysis is continuing of the importance of atmospheric heat flows to ice decay and strength.

155. RUTHERFORD, G.K., SMITH, J.L., Queen's Univ. (Geography): Geochemistry of sewage sludge spread on fine and medium textured soils, 1984-87; M.Sc. thesis (Smith).

GEOCHEMISTRY/GEOCHIMIE

ANALYTICAL METHODS AND ANALYSIS/MÉTHODES ANALYTIQUES ET ANALYSES

156. CHAN, C., Ontario Geol. Surv.: Determination of carbonate carbon in 41 international geochemical reference samples by coulometric method, 1985-86.

See:

Geostandards Newsletter, vol. 10, no. 2, October 1986, p. 131-134, 1986.

The carbonate-carbon (CO_2) content of forty-one geochemical reference samples has been determined by coulometric method following acid treatment of the sample for releasing CO_2. The method is superior to the conventional methods in speed, accuracy, sensitivity, and the coverage of CO_2 range. The precision of the method is 0.5% r.s.d., and the practical detection limit is 10 ppm C. The results on NBS limestone samples agree well with the certified values.

157. DOHERTY, A., VANDER VOET, A., Ontario Geol. Surv.: Trace element analysis in geological materials by ICP/MS, 1986.

An investigation of matrix effects in ICP/MS was undertaken to improve the accuracy of trace elemental analysis of geological materials by ICP/MS. The instrument was optimized on the basis of these experiments. Subsequent studies on a wide range of CRM's showed the technique to be useful for accurate and precise analysis of the rare earth elements with no preseperation. The technique was also applied to the determination of Sn Th and U in solutions prepared by lithium metaborate fusion.

158. HALL, G.E.M., Geol. Surv. Can.: Analytical services and development in geochemistry, 1958-

See:

Determination of tungsten and molybdenum at low levels in geological materials by inductively coupled plasma mass spectrometry; J. Analytical Atomic Spectrometry, vol. 2, p. 189-196, 1987.

Electrothermal vapourization as a means of sample introduction into an inductively coupled plasma mass spectrometer: a preliminary report of a new analytical technique; Geol. Surv. Can., Paper 86-1B, p. 767-773, 1986.

Advances in analytical methods based on atomic absorption spectrometry in the Geochemistry Laboratories of the Geological Survey of Canada; Geol. Surv. Can., Paper 87-1A, p. 477-484, 1987.

A preliminary investigation of the application of microwave radiation for the dissolution of geological materials; ibid., p. 485-488, 1987.

159. HUTCHEON, I.E., BLOCH, J., Univ. Calgary (Geology and Geophysics): Diagenesis of the Hulcross and Boulder Creek formations: A study of mass transport between shales and sandstones, 1986-89; Ph.D. thesis (Bloch).

To examine mass transfer of mobile elements on both a mesoscopic (within a mudrock unit) and macroscopic scale (interformational) within a basinal burial context and provide data on the mineralogy of and elemental distribution within the examined units.

160. HUTCHEON, I.E., NAHNYBIDA, C.G., SHEVALIER, M.T., Univ. Calgary (Geology and Geophysics): Water-rock interactions, 1984-87.

The development of sampling, analytical, and theoretical methods for using samples of produced fluids from steam pilots in the determination of the nature and extent of mineralogical alteration and of the kinds of physical and chemical reactions which occur between injected and formation fluids.

161. JOHNSON, W.M., British Columbia Ministry Energy, Mines, Petrol. Res.:
Analytical sciences laboratory.

To supply analytical and other laboratory services to Geological Survey geologists.

EXPLORATION, ORGANIC/ APPLIQUÉE, ORGANIQUE

162. BARNES, M.A., Univ. British Columbia (Geological Sciences):
Diterpenoids as biomarkers in Tertiary sediments from the Beaufort Sea, Arctic Canada, 1987-88.

163. BARNES, M.A., Univ. British Columbia (Geological Sciences):
Biomarkers in Early Cenozoic coals and resins, Hat Creek, British Columbia, 1987-88.

164. BARNES, M.A., BARNES, W.C., Univ. British Columbia (Geological Sciences):
Diterpenoid diagenesis in Powell Lake, British Columbia, 1981-.

165. BARNES, W.C., BARNES, M.A., Univ. British Columbia (Geological Sciences):
Diterpenoid biomarkers in Tertiary resins from the Dominican Republic, British Columbia and Ellesmere Island, 1986.

166. BROOKS, P.W., Geol. Surv. Can.:
Development of extraction, identification and correlation systems for organic compounds from sedimentary rocks and crude oils, 1973-.

See:

Origin of compositional differences amongst oils from the Hummingbird Field (Paleozoic), southeast Saskatchewan; Geol. Surv. Can., Paper 87-1A, p. 331-336, 1987.

167. FEDIKOW, M.A.F., Manitoba Energy and Mines (Geol. Services):
Peat bog and vegetation geochemical studies along the Agassiz metallotect, Lynn Lake, Manitoba, 1984-.

See:

Vegetation geochemical studies, Lynn Lake and Snow Lake areas; Manitoba Mineral Res. Div. Rept. Field Activities, p. 18-21, 1986.

Chemical analyses are on-going and will form the basis for open file reports to be released.

168. FORTESCUE, J.A.C., WEBB, J.R., Ontario Geol. Surv.:
Orientation geochemical survey at the Lac des Iles Complex, Ontario, 1986-87.

See:

An orientation geochemical study at the Lac des Iles Complex, District of Thunder Bay; Ontario Geol. Surv., M.P. 132, p. 217-219, 1986.

An orientation survey was carried out over the Roby Zone in the Lac des Iles intrusive complex using humus sampling techniques, in order to discover if humus could be used as a geochemical medium, in areas of relatively thin overburden, for platinum group metals. This site was chosen partially because of favorable forest cover conditions in the vicinity of significant palladium-platinum mineralization.

169. JONASSON, I.R., Geol. Surv. Can.:
Environmental geochemistry, 1974-.

170. LaSALLE, P., BEAUMIER, M., KIROUAC, F., LEDUC, M., Ministère de l'Énergie et des Ressources du Québec:
Bacilleus Cereus.

Recherche sur le lien entre la bactérie Bacilleus Cereus et la présence de métaux, surtout l'or, en quantité anormale.

171. MOSSMAN, D.J., KRUMBEIN, W., DYER, B.D., Mount Allison Univ. (Geology):
Nature and origin of stratiform kerogen seams in Lower Proterozoic Witwatersrand-type paleoplacers, 1985-88.

172. NIELSEN, B., BARNES, M.A., Univ. British Columbia (Geological Sciences):
Stable carbon mass spectrometry of aromatic hydrocarbons formed during early diagenesis of lacustrine sediments, 1985-88; M.Sc. thesis (Nielsen).

173. SNOWDON, L.R., Geol. Surv. Can.:
Hydrocarbon geochemistry of Arctic Archipelago and Canadian East Coast offshore, 1976-.

174. SNOWDON, L.R., Geol. Surv. Can.:
Hydrocarbon geochemistry of northern Interior Plains and Beaufort Sea, 1976-.

175. TAIT, L., CÔTÉ, H., GUHA, J., FOWLER, A.D., GARNEAU, F.X., HEROUX, Y., Université du Québec à Chicoutimi (Sciences de la terre):
Character of organic matter and partitioning of trace and rare elements in black shales, Blondeau Formation, Chibougamau, Quebec, 1987; M.Sc.A. (Tait).

176. VELLUTINI, D., BUSTIN, R.M., Univ. British Columbia (Geological Sciences):
Organic maturation studies in the Queen Charlotte Islands, British Columbia, 1986-89; M.Sc. thesis (Vellutini).

Preliminary work completed – to be submitted to Canadian Journal of Earth Sciences.

EXPLORATION, NON-ORGANIC/ APPLIQUÉE, NON-ORGANIQUE

177. BEAUDOIN, A., PERRAULT, G., École Polytechnique (Génie minéral):
Pétrographie et géochimie de l'altération reliée au gîte aurifère Dest-Or, Abitibi, Québec, 1983-85; M.Sc.A. (Beaudoin):

See:

Distribution of gold, arsenic, antimony and tungsten around the Dest-Or orebody, Noranda District, Abitibi, Québec; J. Geochemical Exploration, vol. 27, 1987.

Ce projet est maintenant terminé. La thèse M.Sc.A. de A. Beaudoin a été accepté pour publication.

178. BOUCHARD, M.A., Université de Montreal (Géologie):
Glacial dispersal in Ungava, Quebec, 1985-87.

Glacial dispersal patterns in Ungava; Geol. Surv. Can., Paper 86-1B, p. 295-304, 1986.

179. BOURGET, A., PERRAULT, G., Ecole Polytechnique (Génie mineral):
Geochimie de la minéralisation aurifère de la mine Kiena, Val d'Or, Québec, 1984-86; M.Sc.A. (Bourget).

See:

Distribution of gold around the Kiena S-50 orebody, Val d'Or, Québec; GAC-MAC, Réunion annuelle, Progamme et resumes, vol. 12, p. 80, 1987.

Le gîte d'or S-50 a son lien dans une brèche à l'intérieur des formations mafiques et komatiitiques de la formation Jacola. La carbonatisation, la silicification et l'albitisation sont très étendues et centrées sur le gîte. Le gîte S-50 est enveloppé d'un halo d'or à médiane de 300 ppb Au d'une largeur de 120 m dans les épontes supérieures et 20 m dans les épontes inférieures. L'arsenic et l'antimoine marquent aussi la minéralisation aurifère.

180. BUTLER, J., DAVENPORT, P.H., Newfoundland Dept. Mines and Energy:
Detailed folow up of regional lake sediment anomalies, Labrador Trough, 1985-.

Detailed follow up of lake sediment anomalies using stream sediments, soil sampling, etc., in an attempt to focus regional base metal anomalies and areas with high values of gold pathfinder elements.

181 COUTURE, B., DARLING, R., École Polytechnique (Génie minéral):
Petrography and geochemistry of the Decoeur-Garon hydrothermal alteration pipe, Rouyn, Québec, 1982-87; M.Sc.A. (Couture).

182. DARLING, R., SABOURIN, J., École Polytechnique (Génie minéral):
Conductor evaluation using humus geochemistry, Chibougamau region, Quebec, 1986-.

Voir:

Développement de techniques d'inventaire des grands axes conducteurs; Rapport CDT P931, 1986.

183. DAVENPORT, P.H., Newfoundland Dept. Mines and Energy:
Geochemical mapping using lake sediment, 1982-.

Current work focuses on determining how trace elements in organic centre-lake sediment reflect bedrock geochemical patterns (including those related to mineral deposits), in particular the elements Au, W, Th, la, Ce, Sm, Eu, Tb, Yb and Lu.

184. FEDIKOW, M.A.F., Manitoba Energy and Mines (Geol. Services):
Rock geochemical studies in the Lynn Lake area, Manitoba, 1984-.

See:

Gold mineralization associated with the Agassiz metallotect and the Johnson Shear Zone, Lynn Lake greenstone belt, Manitoba; CIM Sp. Vol. 38, 1986.

To develop rock geochemical exploration techniques aplicable to exploration for gold and base metal mineral deposits.

185. FLETCHER, W.K., Univ. British Columbia (Geological Sciences):
Gold: its form and distribution in soils is the vicinity of Au mineralization, 1986-.

Preliminary studies of size and density distribution of Au in soils in proximity to Au mineralization have been undertaken at several sites in southern British Columbia. Initial results indicate that a significant amount of Au can be present in the light mineral fraction. In the heavy mineral fraction (Sb >3.3) rare particles of free gold give erratic, non-reproducible highly anomalous values.

186. FLETCHER, W.K., Univ. British Columbia (Geological Sciences):
Seasonal variations in gold content of drainage sediments, 1986-.

Ongoing study of seasonal variations of Au content of sediments as a result of winnowing and reworking of sediment during the freshet. The study area is near Lumby in southern British Columbia.

187. FLETCHER, W.K., DAY, S., Univ. British Columbia (Geological Sciences):
Dispersion and sedimentological behaviour of gold in stream sediments, 1985-; M.Sc. thesis (Day).

See:

Particle size and abundance of gold is selected stream sediments, southern British Columbia, Canada; J. Geochem. Explor., vol. 26, no. 3, p. 203-214, 1986.

Stream sediments downstream of five gold occurrences were sampled. Gold contents of six sand and silt size fractions showed that very large sediment samples are required to provide a representative medium sand sample for gold analysis. Minus 53 µm sediment may be a satisfactory alternative for exploration.

188. FORTESCUE, J.A.C., STAHL, H., Ontario Geol. Surv.:
The Northern Lakes interdisciplinary study, 1980-88.

See:

The Northern Lakes interdisciplinary study, Districts of Sudbury and Algoma; Ontario, Geol. Surv., M.P. 132, p. 234-238, 1986.

Geochemical research studies involving the development of remote sensing and lake water and sediment geochemical methodology in acid-stressed environments, were continued during the field season. At test sites located near Sudbury and the Montreal River (between Sault Ste. Marie and Wawa), a multidisciplinary team composed of scientists from three Ontario Ministries, two Ontario universities, and the Research Institute of Michigan, collected ground and airborne data which were synchronized with Landsat 5 overflights. A report containing the results of this project will be published in 1987.

189. FORTESCUE, J.A.C., WEBB, J.R., Ontario Geol. Surv.:
Geochemical studies at Opapimiskan Lake, North Caribou Lake area, Ontario, 1986-87.

See:

Preliminary geochemical studies at Opapimiskan Lake, North Caribou Lake area, District of Kenora, Patricia Portion; Ontario Geol. Surv., M.P. 132, p. 386-388, 1986.

Orientation geochemical surveys were carried out during the summer field season. A 400 km^2 area of lakes, including Opapimiskan and Skinner Lakes, was sampled using a gravity coring device, to establish the feasibility of regional geochemical surveying in the North Caribou Lake Belt. As well within this ara, two gold occurrences were selected for humus samling to test the feasibility of obtaining reliable geochemical information on gold showings in this area.

190. FOSCOLOS, A.E., Geol. Surv. Can.:
Clay and clay minerals investigation, 1968-.

191. HORNBROOK, E.H.W., Geol. Surv. Can.:
National geochemical reconnaissance, 1975-.

192. HUTCHEON, I.E., LEE, J., Univ. Calgary (Geology and Geophysics):
Lithofacies and diagenesis of the Avalon sandstone, Hibernia field, Grand Banks of Newfoundland, 1984-87; M.Sc. thesis (Lee).

193. JONASSON, I.R., Geol. Surv. Can.:
Trace elements in sulphides, 1974-.

See:

Preliminary investigations of the abundance of platinum, palladium and gold in some samples of Canadian copper-nickel ores; Geol. Surv. Can., Paper 87-1A, p. 835-846, 1987.

194. LAMARCHE, R., BERGERON, M., INRS-Géoressources:
Diversification des métallotectes, 1986-87.

Recherche de métallotectes reliés à l'or d'autres substances d'intérêt économique dans l'aire des anciennes mines de cuivre de l'Estrie.

195. LEVINSON, A.A., Univ. Calgary (Geology and Geophysics):
Exploration Geochemistry: a) uranium exploration; b) gold exploration using ammonium halos, 1972-.

See:

Uranium series disequilibrium in young lacustrine sediments from an arid environment at Henkries, Republic of South Africa; Applied Geochemistry, vol. 1, p. 535-548, 1986.

Ammonium halos in lithogeochemical exploration at the Horse Canyon carbonate-hosted deposit, Nevada U.S.A.: use and limitations; ibid., p. 407-417, 1986.

196. MAURICE, Y.T., Geol. Surv. Can.:
Regional geochemistry, northern Canadian Shield, 1976-.

197. MAURICE, Y.T., Geol. Surv. Can.:
Geochemical exploration technology in ultrabasic complexes, 1983-.

198. MAURICE, Y.T., Geol. Surv. Can.:
Heavy mineral studies, Eastern Townships, Québec, 1984-.

199. MAURICE, Y.T., Geol. Surv. Can.:
Heavy mineral studies, Gaspé, Québec, 1984-.

See:

Distribution and origin of alluvial gold in southwest Gaspésie, Quebec; Geol. Surv. Can., Paper 86-1B, p. 785-795, 1986.

200. McCONNELL, J., DAVENPORT, P.H., Newfoundland Dept. Mines and Energy:
An investigation of geochemical methods of gold exploration in Newfoundland, 1986-88.

The project is researching various sampling and analytical methods and the response of various sample media including soil, stream and lake sediment and humus in proximity to gold mineralization.

201. McTAGGART, K.C., KNIGHT, J., Univ. British Columbia (Geological Sciences):
Composition of lode and placer gold; M.Sc. thesis (Knight).

See:

The composition of placer and lode gold from the Fraser River drainage area, southwestern British Columbia, Geol. J., CIMM, vol. 1, no. 1, p. 21-30, 1986.

202. MOSSMAN, D.J., GODDARD, C.E., Mount Allison Univ. (Geology):
Geochemical evaluation of paleosols at the Huronian Archean unconformity, Elliot Lake, Area, Ontario, 1986-87.

To elucidate the geological processes involved in generation of Proterozoic paleosols developed on greenstones and on granite bedrock, and to assess metallogenic implications particularly with respect to the geology or uranium and gold deposits.

203. MOSSMAN, D.J., NAGY, B., DYER, B.D., FRITZ, P., Mount Allison Univ. (Geology):
Geology of auriferous and uraniferous Witwatersrand-type paleoplacers, 1984-88.

Focus on geochemistry of Au and U in Lower Proterozoic paleoplacers, with particular emphasis on the nature and origin of "thucholites" in these rocks. To assess whether or not some "thucholite" is of organic origin, and if so, determine the geological processes involved in its genesis, and the conditions which led to Au/U becoming concentrated (biogenically?) in it.

204. NICHOL, I., BREE, D., Queen's Univ. (Geological Sciences):
Partitioning of gold in humus as a key to understanding gold dispersion in humus; M.Sc. thesis (Bree).

205. NICHOL, I., LAVIN, O., GRANT, A., Queen's Univ. (Geological Sciences):
The optimization of geochemical exploration techniques for gold deposits in areas covered by glacial till.

In the process of completing 2 year program. Publication possible after 1 year from time of delivery of results to participating companies (URIF funded).

206. NICHOL, I., LAVIN, O., NUCHANONG, T., Queen's Univ. (Geological Sciences):
Geochemical exploration for gold in Thailand; M.Sc. thesis (Nuchanong).

207. NICHOL, I., SHAW, J., LAVIN, O., McCLENAGHAN, B., Queen's Univ. (Geological Sciences, Geography):
Quaternary geology and geochemical exploration in the Matheson area; M.Sc. thesis (McClenaghan).

208. NIELSEN, E., Manitoba Energy and Mines (Geol. Services):
Till geochemical studies, Manitoba, 1982-.

To develop till geochemical exploration techniques to aid in the exploration for gold and base metals.

209. PERRAULT, G., SABOURIN, L., TRUDEL, P., École Polytechnique (Génie minéral):
Étude de la distribution de l'or dans le batholite de Flavrian, district de Rouyn-Noranda, Québec, 1985-86.

La trondhjemite, principale roche intrusive du batholite de Flavrian a une teneur Au lognormale: médiane à 0.7 ppb, P_{16} à 0.2 et P_{84} à 2.5 ppb Au. Le batholite de Flavrian ne saurait constituer une roche source pour l'or des gîtes avoisinants.

210. SIMARD, A., LACROIX, S., Ministère de l'Énergie et des Ressources du Québec:
Géochimie des volcanites des collines Cartwright et des

environs, Matagami, Québec, 1985-87.

211. STEELE, K.G., BAKER, C.L., McCLENAGHAN, M.B., BLOOM, L.B., Ontario Geol. Surv.: Reconnaissance till sampling program, Matheson-Lake Abitibi area, Ontario.

See:

Reconnaissance till sampling program, Matheson-Lake Abitibi area, District of Cochrane; Ontario Geol. Surv., M.P. 132, p. 398-403, 1986.

The third year of a reconnaissance till sampling project, which is being carried out in cooperation with the Engineering and Terrain Geology Section and forms part of the Black River-Matheson (BRIM) Program continued during 1986-87. During the summer field season, unconsolidated cores obtained during two previous field seasons were sorted and filed in Drill Core Libraries at Kirkland Lake and Timmins. Surficial till exposures were hand sampled in areas inaccessible to either a backhoe or drilling equipment. Sampling by sonic drilling methods continued through the winter months in areas not accessible by logging roads, so that an even distribution of sample sites in areas of thick drift can be realized.

212. THOMAS, A., Newfoundland Dept. Mines and Energy: Gold reconnaissance in the Archean Ashuanipi Complex of western Labrador, 1986-87.

The project was initiated after gold mineralization was found in amphibolite to granulite grade gneisses in the Superior Province northwest of Scherfferville. Purpose of project was to carry out a general investigation for the gold potential of similar host rocks in the Ashuanaipi Complex of western Labrador.

213. TREMBLAY, F., GUHA, J., SHEPPARD, S.M.F., FOWLER, A.D., Université du Québec à Chicoutimi (Sciences de la terre): Étude de reconnaissance en géochimie isotopique de l'oxygène et de l'hydrogène: application à quelques minéralisations de la région de Chibougamau, Québec,Canada, 1984-87; M.Sc.A. (Tremblay).

214. VALIQUETTE, G., BELLEHUMEUR, C., MARCOTTE, D., École Polytechnique (Génie minéral): Lithogéochimie des calcaires supérieurs de Gaspé, Québec, 1985-87; thèse de maîtrise (Marcotte).

Voir:

Lithogéochimie des calcaires supérieurs de Gaspé; MERQ MB-86-45, 1986.

Caractériser chimiquement les formations reliées à la zone minéralisée du gisement de cuivre porphirique de Gaspé Copper. Les horizons favorables de la Formation de Shiphead ont été analysés entre Cap Gaspé et Causapscal.

215. WARREN, H.V., HORSKY, S.S., Univ. British Columbia (Geological Sciences): Thallium and selenium, an improved approach to exploration for mineral deposits in British Columbia, 1984-88.

See:

Thallium a biogeochemical prospecting tool for gold; Geochemical Exploration, vol. 26, p. 215-221, 1986.

This may be considered a most successful project and compliments our previous work on similar studies on the use of arsenic and mercury as "pathfinders" for ore dsposits.

GENERAL/GÉNÉRALITÉS

216. AL-AASM, I., MUIR, I.D., Univ. Ottawa (Geology): Petrographic and isotopic studies of fibrous calcite cements in the Middle Devonian Hare Indian Formation, N.W.T., Canada, 1986-87.

217. AL-AASM, I., TAYLOR, B., SOUTH, B., Univ. Ottawa (Geology): Chemical separation techniques appraisal for isotopic analysis of multiple carbonate samples, 1986-87.

218. BALLANTYNE, S.B., Geol. Surv. Can.: Applied geochemistry for the Cordillera, 1979-.

219. BARAGAR, W.R.A., Geol. Surv. Can.: Stratigraphy and geochemistry of the volcanic rocks of the Circum-Ungava Belt, District of Keewatin, 1978-.

220. BARNES, S.J., GUHA, J., POITRAS, A., Université du Québec à Chicoutimi (Sciences de la terre): Distribution of platinum group elements in hydrothermal environments, 1987-90; Ph.D. thesis (Barnes).

See:

Variations in Platinum Group element concentrations in the Aleko Mine Komatiite; Geol. Mag., vol. 123, p. 513-524, 1986.

The fractionation of the platinum group elements in some komatiites of the Abitibi Greenstone Belt; Econ. Geol., vol. 82, p. 162-174, 1987.

To establish whether any of the platinum group elements are mobile in the hydrothermal environments, and to establish whether there is any difference in the relative mobility of the different platinum group elements.

221. BOYLE, D.R., Geol. Surv. Can.: Groundwater geochemistry in mineral and hydrocarbon exploration, 1983-.

222. BRAND, U., Brock Univ. (Geological Sciences): Chemical diagenesis of carbonate systems, 1980-87.

See:

Paleoenvironmental analysis of Middle Jurassic (Callovian) ammonoids from Poland: trace elements and stable isotopes; J. Paleontol., vol. 60, p. 293-301, 1986.

Depositional analysis of the Breathitt Formation's marine horizons, Kentucky: trace elements and stable isotopes; Isotpe Geoscience, vol. 65, p. 117-136, 1986.

223. BROWN, T.H., Univ. British Columbia (Geological Sciences): Computer calculation of phase diagrams, 1980-.

See:

PT-system, T-X system, P-X system: three programs which calculate P-T-X phase diagrams; Computers and Geosciences, vol. 12, no. 6, p. 749-755, 1986.

Work is continuing on phase diagram calculator for solid-gas-to melt phase equilibria.

224. **BROWN, T.H.**, Univ. British Columbia (Geological Sciences): Equation of state for solids and thermodynamic databases of minerals, 1985-.

See:

Derivation of internally-consistent thermodynamic data by the technique of mathematical programming: a review with application to the system $MgO-SiO_2-H_2O$; J. Petrology., vol. 27, pt. b, p. 1331-1364, 1986.

Work is continuing on extending the equation of solid to high temperature and pressure. This is required to extrapolate thermodynamic data to 3000K and 2 megabars in order to calculate possible reactions in the deep mantle core.

225. CAMERON, E.M., Geol. Surv. Can.: Isotopic geochemistry, Precambrian mineralized basins, District of Mackenzie and Ontario, 1980-.

See:

Oxygen fugacity of Archean felsic magmas: relationship to gold mineralization; Geol. Surv. Can., Paper 87-1B, p. 281-298, 1987.

226. COKER, W.B., Geol. Surv. Can.: Geochemical methodologies in glaciated terrains, Manitoba and Ontario, 1986-.

227. de ROSEN-SPENCE, A., SINCLAIR, A.J., Univ. British Columbia (Geological Sciences): Implications of the chemistry of volcanic sequences in the Canadian Cordillera, 1984-88.

See:

Classification of the Cretaceous volcanic sequences of British Columbia and Yukon; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 419-427, 1987.

228. DYCK, W., Geol. Surv. Can.: Disequilibrium in the uranium series, 1978-.

229. ELLWOOD, D.J., Geol. Surv. Can.: Automated geochemical cartographic development, 1975-.

230. FUZESY, L.M., Saskatchewan Geol. Surv.: Geology of the Winnipegosis and Dawson Bay formations and its relationship to the potash beds of the Prairie Evaporite in the Bredenbury-Esterhazy-Rocanville-St. Lazare area, Saskatchewan, 1987.

231. GIBBINS, W.A., Indian Affairs and Northern Development (NAP) Canada: Hope Bay volcanic belt, N.W.T., 1986-.

See:

High magnesium or komatiitic peridotite from the Archean Hope Bay volcanic belt, Slave Province, NWT; GAC-MAC Ann. Meeting, Program with Abstracts, vol. 11, 1986.

Completion of field mapping of northern third of belt. Geochemistry and petrology of Komatiitic peridotites partially complete/more field mapping, continuation of geochemistry and petrology, attempt metallogenic model and exploraton criteria for area, assess carvingstone potential.

232. GOODFELLOW, W.D., Geol. Surv. Can.: Regional geochemistry, Yukon Territory, 1977-.

233. GOODFELLOW, W.D., Geol. Surv. Can.: Geochemistry of mineral occurrences and their host rocks in the Northern Cordillera, 1979-.

234. GOODWIN, A.M., Univ. Toronto (Geology): Geochemistry of the Slave volcanic rocks, N.W.T.

See:

Geochemistry of the Slave volcanic rocks, Yellowknife belt, parts of NTS 85J/16, NWT; DIAND EGS 1986-8.

Geochemical investigations of High Lake volcanic belt also underway; sampling completed in 1985.

235. HALDEN, N.M., Univ. Manitoba (Geological Sciences): Geochemistry and tectonic setting of late auorogenic granitic magmatism at the Churchill-Superior boundary zone, 1984-88.

To constrain the development of the Churchill-Superior boundary zone along the Assean Lake Fault. Granitic magmatism can be shown to be late with respect to the geological history of host rocks, however, the Fox Lake granite is displaced along the Assean Lake Fualt.

236. HALDEN, N.M., Univ. Manitoba (Geological Sciences): Geochemical characterization of mafic and ultramafic volcanic rocks at the Churchill-Superior boundary zone, 1988.

Material prepared for analysis is now complete — to establish a potential tectonic setting for volcanic rocks at the margin of the Superior Craton. Study includes material from Assean, Ospwagon and Moak Lakes, will eventually include Fox River Sill material.

237. HALDEN, N.M., CLARK, G.S., Univ. Manitoba (Geological Sciences): Geochemical investigation of granitic rocks in the Snow Lake-Flin Flon terrane, 1988-89.

Material prepared for analysis is now complete — to establish the geochemical characteristics of granitic bodies associated with known mineralization, and to employ trace element discrimination techniques to establish the tectonic setting of the Snow Lake-Flin Flon terrane.

238. HALDEN, N.M., TIRSCHMANN, P., Univ. Manitoba (Geological Sciences): Geochemical evolution and physical development of the layered and composite Falcon Lake Igneous Complex, 1988; M.Sc. thesis (Tirschmann).

To determine the crystallization history of the Falcon Lake Igneous Complex. Includes a study of the geochemical evolution (gabbro to quartz monzonite) and a study to determine physical parameters related to layering.

239. HALDEN, N.M., ZALESKI, E., Univ. Manitoba (Geological Sciences): Geochemical and thermodynamic constraints on the development of the hydrothermal system associated with the Linda deposit: Snow Lake, Manitoba, 1985-89; Ph.D. thesis (Zaleski).

Whole rock and mineral geochemistry from a fossil hydrothermal system is being intergrated with recent developments in thermodynamic modelling.

240. HUTCHEON, I.E., ABERCROMBIE, H.J., Univ. Calgary (Geology and Geophysics): Remote monitoring of water-rock interactions during in-situ steam-

assisted heavy oil recovery, 1984-88; Ph.D. thesis (Abercrombie).

Identify and monitor in-situ fluid-mineral reactions occurring during steam-assisted thermal recovery by sampling and analyzing produced water, gas and oil, and modelling results using geochemical thermodynamic/kinetic models. Investigating thermodynamic properties of high salinity fluids.

241. HUTCHEON, I.E., NAHNYBIDA, C.G., McMECHAN, C.V., Univ. Calgary (Geology and Geophysics): Relationships of authigenic mineralogy, water chemistry, hydrocarbon chemistry and overpressuring in the Venture Field, Scotian Shelf, 1985-87.

The overpressured zone in the Venture Field can be demonstrated to be closely linked to mineral reactions.

242. KERR, A., Newfoundland Dept. Mines and Energy: Intrusive rocks of the Eastern Central Mineral Belt, 1985-89.

See:

Plutonic rocks of the Eastern Central Mineral Belt: lithogeochemical patterns and identification of potential specialized granites; Newfoundland Dept. of Mines and Energy, Rept. 87-1, 1987.

243. KING, R.H., Univ. Western Ontario (Geography): Identification of the raw materials used in the manufacture of archaeological ceramics in southwestern Cyprus, 1983-88.

See:

Provenance of archaeological pottery; Canadian Geographer, vol. 30, no. 1, p. 87-90, 1986.

A multivariate analysis of pottery from southwestern Cyprus using neutron activation analysis data; J. Archaeological Sci., vol. 13, p. 361-374, 1986.

Multivariate statistical analysis of a total of 29 macro, trace and rare earth elements of INAA on 129 pottery specimens obtained from 30 archaeological sites in southwestern Cyprus has indicated that the large majority of the ceramics had been manufactured locally. XRD analysis of a set of clay-rich deposits which may have served as raw materials in the manufacture of the ceramics shows a complex clay mineral suite comprising variable amounts of chrysotile, kaolinite, hydrous mica, smectite, chlorite, and interlayered vermiculite. Discriminant function analysis of compositional data obtained for the clay samples identified those clay types most probably used in the manufacture of the ceramics. The results reveal that, in the selection of raw materials to be used in the manufacture of the archaeological ceramics, preference was given to clays from very local alluvial and colluvial deposits.

244. KYSER, T.K., CALDWELL, W.G.E., WHITTAKER, S.J., CADRIN, A.J., Univ. Saskatchewan (Geological Sciences): Environmental geochemistry of Upper Cretaceous rocks in the southern Interior Plains, 1984-; Ph.D. thesis (Whittaker), M.Sc. thesis (Cadrin).

See:

Paleoenvironmental geochemistry of the Claggett marine cyclothem in south-central Saskatchewan; Can. J. Earth Sci., vol. 24, no. 5, p. 967-984, 1987.

Toward understanding the geochemistry of the Western Interior seaway of Late Cretaceous time, using chemical and isotopic data from the preserved rock and fossil sequences.

245. LANGFORD, F.F., RENAUT, R.W., BOYS, C., BROWN, R.H., Saskatchewan Geol. Surv.: Nature, origin and predictability of geological anomalies in the potash mines of Saskatchewan, 1986-87; M.Sc. thesis (Boys).

See:

The clay rocks in the PCS Mining; Cory Division Potash Mine, Saskatchwan; Saskatchewan Geol. Surv., Misc. Rept. 86-4, p. 179-182, 1986.

Includes, a bibliographic compilation of all available geological data in the potash mining company files and a compilation of geological anomaly distribution maps.

246. LUDEN, J.N., FRANCIS, D., SKULSKI, T., CHARLAND, A., Université de Montréal (Géologie), McGill Univ. (Geological Sciences): Cenozoic evolution of volcanic centers in southern Yukon, northern and central British Columbia, 1984-; Ph.D. theses (Skulski, Charland).

See:

Geochemical variation in primary alkaline magmas associated with the Alligator lake volcanic complex, Yukon, Canada; Cont. Min. Pet., 1987.

Fe-rich olivine nephelinites primary magmas from Fort Selkirk, Yukon, Caada; EOS, vol. 67, p. 390, 1986.

Continental alkali-basalt and nephelinite magma with MORB-isotopic characteristics; EOS, vol. 67, p. 390, 1986.

Geochemical studies pertaining to the petrogenesis of volcanic rocks from Cenozoic to Recent centers: 1) Fort Selkirk, Yukon, 2) Alligator Lake, Yukon, 3) Mt. Edziza, north-central British Columbia, 4) St-Clare volcanics, Yukon, and 5) Anahim volcanics, British Columbia.

247. MARMONT, S., Ontario Geol. Surv.: Characterization of late tectonic felsic intrusions, Abitibi belt, 1987-89.

248. MARMONT, S., TROOP, D.G., Ontario Geol. Surv.: Geochemistry of altered and unaltered rocks in the Detour Lake Mine area, Ontario, 1986-87.

249. MAURICE, Y.T., Geol. Surv. Can.: Lithogeochemical studies, Gaspé Peninsula, Québec, 1984-.

250. PINTSON, H., LUDDEN, J.N., Université de Montréal (Géologie): Late Archaean granitoid genesis in the Superior Province of Canada, 1986-; Ph.D. thesis (Pintson).

Evaluation using trace elements and isotopic traces of the origins of late Archaean granitoids from the Abitibi belt, in particular, and on a more general basis the Superior Province.

251. QUIRT, D., HOEVE, J., Saskatchewan Research Council (Mineral Res.): Copper mineralization in the Copper Harbour Conglomerate and the Nonesuch Shale formations, White Pine area, Michigan, 1986-88.

See:

A common diagenetic-hydrothermal origin for unconformity-type uranium and stratiform copper deposits; GAC/MAC 1986 Symp. Vol. on Sediment-hosted Stratiform Copper Deposits (also Saskatchewan Research Council Rept. No. R-855-5-A-86, 1986).

Current studies bear on the redox metallogenesis of copper in the Nonesuch Shale and the Copper Harbour Conglomerate.

252. SUSAK, N.J., PAN, PUJING, Univ. New Brunswick (Geology): Chemistry of cobalt complexes in hydrothermal solutions, 1982-; Ph.D. thesis (Pan).

To determine the thermodynamic properties and the molecular structure of cobalt chloride complexes in NaCl solutions. Solubility studies of Co-CoO assemblages have commenced. Spectrophotometric studies of Co chloro-, fluoro-, bromo-, and hydroxo-complexes are in progress. Low temperature (< 100°C) studies of the dissolution kinetics of CoO are completed.

253. TAYLOR, B.E., Geol. Surv. Can.: Light stable isotope geochemistry of rock and ore-forming processes, 1985-.

254. THORPE, R.I., Geol. Surv. Can.: Lead isotopic studies on genesis of ore deposits, 1978-.

See:

Pb-Pb isochron age of uraniferous phosphorite at the base of the Menihek Formation, Labrador Trough; Geol. Surv. Can., Paper 86-1B, p. 585-589, 1986.

Lead-isotope study of mineralizaion in the Cobalt district, Ontario; Can. J. Earth Sci., vol. 23, no. 10, p. 1568-1575, 1986.

GEOCHRONOLOGY/GÉOCHRONOLOGIE

255. ARCHIBALD, D.A., FARRAR, E., Queen's Univ. (Geological Sciences):
Tectonothermal history of the southern Kootenay Arc and Purcell Anticlinorium, southeastern British Columbia, 1976-.

^{40}Ar/^{39}Ar and fission track studies of mid-Cretaceous plutons (e.g. White Creek and Bugaboo batholiths) are in progress. In addition, the Precambrian thermal history of rocks in the Purcell Anticlinorium is being investigated in an ^{40}Ar/^{39}Ar study of the Hellroaring Creek area and Moyie (and younger) mafic intrusions.

256. ARCHIBALD, D.A., FARRAR, E., Queen's Univ. (Geological Sciences):
An isotopic study of granitoid rocks associated with W-skarn, Selwyn Mountains, Yukon and Northwest Territories, 1985-.

Most micas and amphiboles yield K-Ar dates of ~95 Ma, however, a few exceptions have been found. In this preliminary investigation coexisting K-feldspar and apatite will be used (^{40}Ar/^{39}Ar and fission track) to study the low temperature thermal history of these plutons.

257. ARCHIBALD, D.A., FARRAR, E., CARMICHAEL, D.M., JOURNEAY, J.M., Queen's Univ. (Geological Sciences):
An isotopic study of the west flank of Frenchman's Cap dome, southeastern British Columbia, 1983-.

Whereas all K-Ar mica dates fall between 45 and 55 Ma, amphiboles yield conventional dates as great as 120 Ma. ^{40}Ar/^{39}Ar experiments reveal a component of excess Ar and a complex, pre-Eocene, thermal history.

258. ARCHIBALD, D.A., FARRAR, E., CLARK, A.H., SEAL, R., Queen's Univ. (Geological Sciences), Univ. Michigan (Geological Sciences):
A K-Ar and ^{40}Ar/^{39}Ar study of the Lake George antimony deposit, southern New Brunswick, 1983-86; M.Sc. thesis (Seal).

K-Ar dates suggest a Late Silurian age for mineralization. ^{40}Ar/^{39}Ar step-heating experiments are in progress.

259. ARCHIBALD, D.A., FARRAR, E., HANES, J.A., Queen's Univ. (Geological Sciences):
An ^{40}Ar/^{39}Ar study of the Kapuskasing structural zone, northern Ontario, 1979-.

An isotopic study of the sheared eastern margin of the KSZ is in progress. A regional-scale, isotopic transect of the KSZ and neighbouring regions has been initiated as part of LITHOPROBE.

260. ARCHIBALD, D.A., FARRAR, E., HELMSTAEDT, H., HALL, D., SCHULZE, D., Queen's Univ. (Geological Sciences):
An ^{40}Ar/^{39}Ar investigation of the age of kimberlites and the thermal history of their xenoliths, southeastern British Columbia, 1985-.

261. ARCHIBALD, D.A., FARRAR, E., IRVING, E., WOODSWORTH, G.J., Queen's Univ. (Geological Sciences), Geol. Surv. Can.:
^{40}Ar/^{39}Ar thermal and paleomagnetic studies of the Smith Island Gabbro, British Columbia, 1985-87.

This pluton has been sampled extensively for paleomagnetic studies. ^{40}Ar/^{39}Ar step-heating experiment on amphibole should yield the age of emplacement and the time and magnitude of any later thermal disturbance.

262. ARCHIBALD, D.A., FARRAR, E., MOUNTJOY, E., Queen's Univ. (Geological Sciences), McGill Univ. (Geological Sciences):
A K-Ar and ^{40}Ar/^{39}Ar study of metamorphic rocks near the Purcell thrust, southeastern British Columbia, 1983-.

Biotite-muscovite pairs show a marked reversal of the normal discordance of K-Ar dates. ^{40}Ar/^{39}Ar step-heating experiments will be done in order to assess the tectonothermal history of these samples.

263. ARCHIBALD, D.A., TAYLOR, R., FARRAR, E., Queen's Univ. (Geological Sciences), Carleton Univ. (Geology):
^{40}Ar/^{39}Ar study of the Mt. Pleasant area, New Brunswick, 1985-.

264. ARMSTRONG, R.L., SUN MIN, Univ. British Columbia (Geological Sciences), Univ. Alberta (Geology):
Sr isotope studies of ultramafic nodules and alpine peridotite, 1983-.

Final analyses of mineral separates from Okanagan region nodules and Josephine Peridotite. Paper writing to commence April 1987.

265. ARMSTRONG, R.L., VAN DER HEYDEN, P., Univ. British Columbia (Geological Sciences):
Omineca Belt geochronometry, 1975-.

Sm-Nd and U-Pb dating of Paleozoic and Precambrian gneisses. Preparation of major synthesis 1987-88.

266. ARMSTRONG, R.L., VAN DER HEYDEN, P., FRIEDMAN, R.M., JUNG, A., HARAKAL, J., University British Columbia (Geological Sciences):
Intermontane Belt – age and isotopic composition of major batholiths, igneous petrology, 1975-.

Multiple-technique geochron studies of representative samples of all major plutons.

267. ARMSTRONG, R.L., VAN DER HEYDEN, P., WOODSWORTH, G.J., HARAKAL, J., Univ. British Columbia (Geological Sciences), Geol. Surv. Can.:
Southern Coast Plutonic Complex – ages and isotopic composition, 1975-.

See:

The Gambier Group in the Sky Pilot area, southwestern Coast Mountains, British Columbia; Geol. Surv. Can., Paper 86-1B, p. 685-692, 1986.

Work in Vancouver-Hope-Lilloett triangle continues. Background studies for LITHOPROBE transect.

268. BAADSGAARD, H., Univ. Alberta (Geology):
Isotope geology of the potash salts in the Prairie Evaporite Formation, Saskatchewan, 1982-.

The mode of attack on the geochemical problems has now been established, and an extensive analytical program is planned.

269. BAADSGAARD, H., DAY, L.W., Univ. Alberta (Geology):
Geochronology of the Precambrian shield of northeastern Alberta, 1962-88.

With the completion of Sm-Nd dating on the major lithological units, this long standing project will be completed. A monograph of the Research Council of Alberta is in preparation.

270. BAADSGAARD, H., LERBEKMO, J.F., McDOUGALL, I., Univ. Alberta (Geology), Australian Nat. Univ.:
Multi-method dating of the Cretaceous-Tertiary boundary, 1980-87.

Although a few details remain (such as the problem of K-Ar dating of pyroclastic biotite), the K/T boundary has now been relatively closely dated.

271. BAADSGAARD, H., MASUDA, A., SHIMUZA, N., CERNY, P., Univ. Alberta (Geology), Univ. Tokyo, Univ. Manitoba (Geological Sciences):
A test of La-Ca and La-Ba methods on well dated rare-earth rich minerals from the Huron Claims-Shatford Lake area, Manitoba, 1986-87.

The pegmatite minerals in the Huron Claims area have undergone minimal late metamorphism and are especially suitable to test the new La-Ca and La Ba geochronometers developed by A. Masuda.

272. BAADSGAARD, H., NUTMAN, A.P., BRIDGWATER, D., McGREGOR, V.R., Univ. Alberta (Geology), Memorial Univ. (Earth Sciences), Greenland Geol. Surv., Univ. Copenhagen:
Geochronology of the Archaean North Atlantic craton in West Greenland, 1969-.

See:
Alteration and metamorphism of Amitsog gneisses from the Isukasia area, West Greenland: Recommendation for isotope studies of the early crust; Geochimica et Cosmochimica Acta, vol. 50, p. 2165-2172, 1986.

Geochronology and isotopic variation of the early Archaean Amitsog gneisses of the Isukasia area, West Greenland; ibid., p. 2173-2183, 1986.

Most recently, a new lithological unit of the Nûk gneisses has been discovered. The extent and nature of this unit are now being determined.

273. BAADSGAARD, H., XUE XIANYU, Univ. Alberta (Geology):

Isotope geology and genesis of mantle rocks found as xenoliths in basaltic rocks.

The xenoliths will be subjected to complete mineral analysis.

274. BAADSGAARD, H., YANAGI, T., DUKE, M.J.M., Univ. Alberta (Geology), Univ. Kyushu:

Petrochemistry and isotope geology of the Nûk gneisses, western Greenland, 1985-89; Ph.D. theses (Duke).

To firmly establish the time and mode of genesis of a major crustal component in the North Atlantic Craton and to compare this with the Early Archaean Amitsog-Isua genesis.

275. BAADSGAARD, H., YANAGI, T., WIJBRANS, J.R., CAVELL, P.A., Univ. Alberta (Geology), Univ. Kyushu:
Rb-Sr and U-Pb dating of selected bentonite horizons for geological time-scale calibration, 1980-.

276. BOWRING, S.A., BÉLANGER, M., Washington Univ., St. Louis, Ministère de l'Énergie et des Ressources du Québec:

Géochronologie de la région de la Fosse du Labrador, Québec, 1986-88.

Connaissance des âges absolus des différentes unités dans la région de la rivière George et dans la Province du Supérieur au NW de Schefferville.

277. CAVELL, P.A., WIJBRANS, J.R., BAADSGAARD, H., Univ. Alberta (Geology):
Geochronology and petrogenesis of the Archean Kaminak Lake alkaline intrusion and the surrounding country rock, N.W.T., 1986-89.

See:

Preliminary results of an isotopic study of the Kaminak Lake Archean terrane (N.W.T.); G.A.C.-M.A.C. Ann. Meeting, Program with Abstracts, vol. 12, p. 29, 1987.

278. CHARUSIRI, P., FARRAR, E., CLARK, A.H., Queen's Univ. (Geological Sciences):
Geochronological and metallogenetic aspects of scheelite skarn mineralization, Thailand, 1985-; Ph.D. thesis (Charusiri).

279. EASTON, R.M., Ontario Geol. Surv.:
Isotopic age compilation map of Ontario, 1983-.

See:

Geochronology compilation maps of Ontario; Ontario Geol. Surv., Prel. Maps P. 2840-2844, 1986.

Geochronology of the Grenville Province; Geol. Assoc. Canada, Sp. Paper 31, p. 127-173, 1986.

Initial compilation has been compiled and published. Compilation work is continuing, and will be released in updated forms at regular intervals.

280. FARRAR, E., ARCHIBALD, D.A., CLARK, A.H., Queen's Univ. (Geological Sciences):
The timing of tungsten and tin mineralization, Korea, 1979-88.

An ^{40}Ar/^{39}Ar and K-Ar study of the Sang Dong and Okbang camps is in progress. K-Ar dates range from 80 to 1850 Ma and ^{40}Ar/^{39}Ar age spectra suggest complex thermal histories for these areas.

281. GERASIMOFF, M.D., FARRAR, E., DIXON, J.M., KROGH, T.E., Queen's Univ. (Geological Sciences), Royal Ontario Museum:
Geochronology and tectonic significance of the Hobson Lake Pluton, Wells Gray Provincial Park, British Columbia, 1984-87; M.Sc. thesis (Gerasimoff).

Geochronologic investigation completed December 1986.

282. GODWIN, C.I., ARMSTRONG, R.L., ABERCROMBIE, S., Univ. British Columbia (Geological Sciences):
Geology and geochemistry of the Zeta tin prospect, Yukon Territory, 1986-88; M.Sc. thesis (Abercrombie).

Involves a geological property map, whole rock chemistry, age dating both K-Ar and U-Pb, and petrology and ore microscopy. Currently involved with a megacrystic quartz syenite analyzing k-feldspar cores and rims for trace element chemistry, Rb-Sr and Pb isotopes suggesting k-feldspars are phenocrysts and not porphyroblasts.

283. GODWIN, C.I., GABITES, J., Univ. British Columbia (Geological Sciences):
Galena lead isotope analyses as related to genesis of and exploration for mineral deposits in the Canadian Cordillera, 1986-89.

Compilation of Cordilleran data on dBaseIII + near completion.

284. GODWIN, C.I., GAUTIER, F., Univ. British Columbia (Geological Sciences):
Galena lead isotope plumbology and metallogeny of the Adams Plateau, south-central British Columbia, 1983-86; M.Sc. thesis (Gautier).

Galena lead isotopes; division of deposit types; detailed deposit descriptions; revised "shale curve".

285. HANES, J.A., Queen's Univ. (Geological Sciences):
^{40}Ar/^{39}Ar geochronology of Sept-Iles anorthosite, Quebec, 1985-.

286. HANES, J.A., Queen's Univ.. (Geological Sciences):
^{40}Ar/^{39}Ar thermochronometry of Mont Laurier syenites, Grenville Province, 1985-.

287. HANES, J.A., ARCHIBALD, D.A., Queen's Univ. (Geological Sciences):
^{40}Ar/^{39}Ar geochronology of diabase dyke swarms in the Wawa-Kapuskasing-Abitibi transect of the Canadian Shield, 1984-.

288. HANES, J.A., CLARK, S.J., ARCHIBALD, D.A., Queen's Univ. (Geological Sciences):
Uplift and cooling history of the Elzevir Pluton in the Grenville Province by ^{40}Ar/^{39}Ar thermochronometry , 1983- ; M.Sc. thesis (Clark).

289. HANES, J.A., HODGSON, C.J., WONG, L., ARCHIBALD, D.A., Queen's Univ. (Geological Sciences):
^{40}Ar/^{39}Ar geochronology of gold mineralization in Sigma Mine, Quebec, in the Archean Abitibi Greenstone Belt, 1984-; M.Sc. thesis (Wong.)

290. HEINRICH, S., FARRAR, E., CLARK, A.H., Queen's Univ. (Geological Sciences):
A geochronological study of the tectono-thermal evolution of the Zongo belt, Bolivian Andes, 1984-87; M.Sc. thesis (Heinrich).

291. HUNTLEY, D.J., GODFREY-SMITH, D.I., Simon Fraser Univ. (Physics):
Optical dating of sediments, 1984-; Ph.D. thesis (Godfrey-Smith).

292. HUNTLEY, D.J., GODFREY-SMITH, D.I., THEWALT, M.L.W., BERGER, G.W., Simon Fraser Univ. (Physics):
Thermoluminescence spectra of minerals relevant to TL and optical dating of sediments, 1986- .

293. HUNTLEY, D.J., KIRKEY, J.J., HUTTON, J.T., PRESCOTT, J.R., Simon Fraser Univ. (Physics), Univ. Adelaide (Physics):
Thermoluminescence dating of a sequence of stranded beach dunes in southeastern South Australia, 1982-; M.Sc. thesis (Kirkey).

294. ISSACHSON, C., BOWRING, S.A., KUSKY, T., KIDD, W., Washington Univ. St. Louis:
Geochronology of the Point Lake (Keskarrah Bay) area and the Cameron River volcanic Belt/Sleepy Dragon Metamorphic Complex; Ph.D. theses (Issachson, Kusky).

Geochronology and structural mapping of the relations of the volcanics of Yellowknife Supergroup to the basement complex.

295. MACDONALD, R., LEWRY, J.F., BELL, K., BIKERMAN, M., BLENKINSOP, J., BICKFORD, M.E., VAN SCHMUS, R., Saskatchewan Geol. Surv., Univ. Regina (Geological Sciences), Univ. Carleton (Geology), Univ. Kansas (Geology):
Regional tectonic and geochronological studies in northern Saskatchewan.

See:

Neodymium, strontium and lead isotope geochemistry project; Saskatchewan Geol. Surv., Misc. Rept. 86-4, 1986.

Preliminary results from U-Pb zircon geochronology of the Uranium City region, northwest Saskatchewan; ibid., 1986.

U-Pb zircon geochronology project for the Trans-Hudson Orogen: current sampling and recent results; ibid., 1986.

Nistowiak Lake geology project (part of NTS 73P-7); ibid., 1986.

A variety of regional studies in the Precambrian area of Saskatchewan; a number of papers are in process with co-authors which relate regional geology, tectonics and age determinations.

296. MARMONT, S., CORFU, F.,
Ontario Geol. Surv., Royal Ontario Mus.:
Timing of felsic magmatism and gold mineralization in the western Abitibi belt, 1983-89.

297. MARMONT, S., YORK, D., LAYER, P., McMASTER, D.,
Ontario Geol. Surv., Univ. Toronto (Physics):
Applications of Ar^{39}/Ar^{40} to dating of gold mineralization in the Archaean, 1985-88.

298. MURPHY, D.C.,
VAN DER HEYDEN, P., Univ. British Columbia (Geological Sciences):
Age of granitoid orthogneisses, Cariboo Mountains, Britrish Columbia, 1986-.

299. PADGHAM, W.A.,
BOWRING, S.A., Indian Affairs and Northern Development (NAP) Canada, Washington Univ. St. Louis (Geology):
Dating Slave Province, N.W.T., 1980-.

Geochronological studies in many parts of Slave structural province to improve maps and relate the mineral deposits to structural events.

300. SIMONETTI, A., DOIG, R., McGill Univ. (Geological Sciences):
Geochronology of granitic rocks, southern Quebec Appalachians, 1986-87; M.Sc. thesis (Simonetti).

Rb-Sr data for six major intrusions yield high initial ratios and much geological scatter. Only three yield dates, one of which (Scotstown) is impossibly high, clearly pointing to systematic mixing with country rocks. U-Pb dating of zircons is in progress.

301. TUREK, A., Univ. Windsor (Geology):
Geochronology (U-Pb zircon) of the Rice Lake greenstone belt, Manitoba, 1985-88.

To establish the absolute chronostratigraphy of a greenstone belt and its relation agewise to the surrounding granitic terrain. Most ages are ca 2730 but an older granite to the north is in part 2914 Ma.

302. TUREK, A., Univ. Windsor (Geology):
U-Pb age determinations of rocks in the Mishubishu greenstone belt, Ontario, 1986-88.

Study is designed to establish absolute chronostratigraphy of this belt and is expansion of the work done on the adjacent Michipicoten greenstone belt.

303. VAN BREEMEN, O., Geol. Surv. Can.:
Isotopic age determinations and radiogenic trace element studies of rocks and minerals, 1983-.

See:

Zircon morphology and U-Pb geochronology in active shear zones: studies on syntectonic intrusions along the northwest boundary of the Central Metasedimentary Belt, Grenville Province, Ontario; Geol. Surv. Can., Paper 86-1B, p. 775-784, 1986.

U-Pb zircon and monazite geochronology and zircon morphology of granulites and granite from the Thelon Tectonic Zone, Healey Lake and Artillery Lake map areas, N.W.T.; Geol. Surv. Can., Paper 87-1A, p. 783-801, 1987.

The age of igneous and metamorphic events in the western Cape Breton Highlands, Nova Scotia; Can. J. Earth Sci., vol. 23, no. 12, p. 1891-1901, 1986.

304. VAN DER HEYDEN, P., Univ. British Columbia (Geological Sciences):
U/Pb and K/Ar geochronology of the Coast Plutonic Complex between 52°N and 55°N, and tectonic implications, 1984-88; Ph.D. thesis.

Final analysis of zircon separates in summer 1987. Thesis and paper writing to commence fall 1987.

305. WEBER, W., KROGH, T.E., MACHADO, N., HEAMAN, L.M.,
Manitoba Energy and Mines (Geol. Services), Royal Ontario Museum:
U-Pb geochronology of northwestern Superior Province, 1985-89.

See:

Precise U-Pb zircon ages for the Molson dyke Swarm and the Fox River Sill; Contrib. Mineral. Petrol., vol. 94, p. 82-89, 1986.

U-Pb geochronology of the Thompson Mobile Belt, Manitoba; preliminary results; GAC-MAC Ann. Meeting, Program with Abstracts, vol. 12, p. 69, 1987.

306. WEBER, W.,
TUREK, A., Manitoba Energy and Mines (Geol. Services), Univ. Windsor (Geology):
U-Pb geochronology of Rice Lake greenstone belt, Manitoba, 1984-87.

See:

New U-Pb zircon ages for the Rice Lake greenstone belt, southeastern Manitoba; GAC-MAC Ann. Meeting, Program with Abstracts, vol. 12, p. 97, 1987.

307. BENMAN, R.G., GREENWOOD, H.J., BROWN, T.H., Univ. British Columbia (Geological Sciences):
Geological computer aplications, 1987.

To make software package for calculation of geologically-useful phase diagrams, to be used on microcomputers; to expand/refine thermodynamic database.

Version 1.0 of GeoØ-Calc released Feb. 15, 1987-allows calculations and subsequent plotting of pressure-temperature, temperature-X_{CO_2}, and pressure X_{CO_2} phase diagrams.

308. CHUNG, C.F., Geol. Surv. Can.:
Development of computer-based statistical techniques applicable to regional geological and mineral deposit data, 1975-.

309. GREENWOOD, B., McGILLIVRAY, D.G., Univ. Toronto (Geography, Geology):
Numerical modelling of sediment transport, 1976-87; Ph.D. thesis (McGillivray).

Modelling shore line stability: predicting time-averaged rates of longshore sediment transport in the Toronto waterfront, Lake Ontario, Canada.

310. GRUNSKY, E.C., EASTON, R.M., THURSTON, P.C., JENSEN, L.S., HOWE, J.M., Ontario Geol. Surv.:
Multivariate lithogeochemical investigation of volcanic rocks for the purpose of classification and detection of altered samples, 1986.

Computer methods for detecting alteration of volcanic rocks as well as the application of multivariate methods that display the variation of several chemical variables simultaneously.

311. NICHOLS, B., Geol. Surv. Can.:
Seismic systems development, 1984-.

312. QUIRT, D., Saskatchewan Research Council:
Implementation of an interactive mass balance computation routine, 1986-87.

A routine is being developed to computerize the Gresen's procedure of mass balance computation for metasomatism. The program generates graphical as well as numerical information.

313. TESKEY, D.J., Geol. Surv. Can.:
Development of regional geophysical data processing and interpretation methods, 1982-.

314. TYRIE, A., Univ. Toronto, Erindale College (Survey Science):
Integration of remote sensing and geographical information systems, 1985-.

See:

If you can't use a pick try image analysis; Geotimes, January 1985.

315. WILCOX, A.F., BORSHOLM, C.B., British Columbia Ministry Energy, Mines, Petrol. Res.:
MINFILE, 1977-.

See:

MINFILE – redesign and progress report; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 433-439, 1987.

The database contains 9233 deposits as of March 15, 1987. MINFILE is currently undergoing a redesign on a VAX 8650 Mini-computer. New fields have been added to the database for mineralization (economic, gangue and alteration) and host rock as well all occurences are being recoded with better geological descriptions being added.

GEOMATHEMATICS/MATHÉMATIQUE DE LA TERRE

316. AGTERBERG, F.P., Geol. Surv. Can.:
Probability models for estimating mineral potential and for geoprocessing, 1969-.

317. BONHAM-CARTER, G.F., Geol. Surv. Can.:
Geomathematical applications in the integration of geoscience map data, 1983-.

318. CHURCH, B.N., British Columbia Ministry Energy, Mines, Petrol. Res.:
Geology and mineral resources of Tertiary outliers in British Columbia, 1980-.

The chemical signature of the epithermal veins in the vicinity of the Blackdome mine is characterized by the sum of pathfinder elements formulated by multiple linear regression analysis. This formulation may afford quantitative comparison with other epithermal deposits and possibly a rough prediction of ore grades knowing only the level of the pathfinder elements (where gold and silver substitute as dependent variables in the equations).

319. GRADSTEIN, F.M., Geol. Surv. Can.:
Quantitative stratigraphy in paleooceanography and petroleum basin analysis, 1985-.

320. GRUNSKY, E.C., AGTERBERG, F.P., Ontario Geol. Surv., Univ. Ottawa (Geology):
Multivariate statistics and spatial analysis applied to igneous rocks in Ontario, 1985-; Ph.D. thesis (Grunsky).

See:

Spatial and multivariate analysis of geochemical data from metavolcanic rocks in the Ben Nevis area, Ontario; NATO Advanced Study Institute, Italy, 1986.

The application of spatial dependence on multivariate data.

321. MELLINGER, M., SMITH, J.W.J., Saskatchewan Research Council (Data Analysis Group):
Geochemistry and data analysis, 1981-.

See:

Interpretation of lithogeochemistry using correspondence analysis: summary of resarch; In: Chemometrics and Intell. Lab. Syst. (Ulvik volume), 1987.

Correspondence Analysis: the method and its application; ibid., 1987.

Multivariate data analysis: its methods; ibid., 1987.

To develop data analysis methodology for the effective interpretation of geochemical data.

322. SINCLAIR, A.J., GIROUX, G.H., Univ. British Columbia (Geological Sciences):
Geostatistics applied to the Venus gold deposit, Montana Mountain, Yukon, 1982-.

323. STANELY, C.R., SINCLAIR, A.J., Univ. British Columbia (Geological Sciences):
Numerical modelling applied to testing efficiency of various anomaly recognition methods, 1985-88; PH.D. thesis (Stanley).

324. TILKOV, M., SINCLAIR, A.J., Univ. British Columbia (Geological Sciences):
Geostatistical evaluation of the Buckhorn Mine, Nevada, 1986-88; M.Sc. thesis (Tilkov).

Study will compare various reserve estimation procedures utilizing exploration data and production blasthole data.

325. ZODROW, E.L., Univ. College of Cape Breton (Geology):
Sulfur distribution and origin in coal of Sydney Coalfield, Nova Scotia, 1985-.

A five-factor model has been derived for explaining sulfur variations which implicates episodic influxes of sulfur-rich solutions from which mineralization occurred (pyrite). Factor-analytical predictions are testable by isotopic and geochronological studies.

GEOMORPHOLOGY/GÉOMORPHOLOGIE

326 CARSON, M.A., McGill Univ. (Geography):
Modes of bed load movement in braided gravel-bed rivers, 1986-88.

See:

Characteristics of high-energy "meandering" rivers: the Canterbury Plains, New Zealand; Bull. Geol. Soc. Amer., vol. 97, p. 886-895, 1986.

327. DESLOGES, J.R., Univ. Toronto, Erindale College (Geography):
Factors influencing long-term sedimentation rates in alpine watersheds, 1987-.

328. DUBOIS, J.-M.M., NADEAU, L., Université de Sherbrooke (Géographie):
Géomorphologie et évolution littorale de la Côte Nord du Saint-Laurent et de l'Ile d'Anticosti, 1976-87

Voir:

Provenance et transport des matériaux dans un environnement de sédiments grossiers, plate-forme littorale rocheuse émergée (Ile d'Anticosti, Québec); Annales de l'ACFAS, vol. 54, p. 211, 1986.

Causes et vitesse d'érosion dans le nord du golfe du Saint-Laurent, Québec, Canada; Symp. on Man's Impact on Coastal Env., Comm. on Coastal Env., IGU, Barcelone, 1986.

Etablir les tendances d'évolution (érosion-sédimentation) à partir de données géologiques, géomorphologiques, historiques et de terrain.

329. FORBES, D.L., Geol. Surv. Can.:
Morphology, sedimentology, and dynamics of Newfoundland coast, 1981-.

330. FOSTER, H.D., SNOW, S., NOBLE, I., SMITH, S., Univ. Victoria (Geography):
Trace and bulk elements and disease, 1985-.

See:

Reducing cancer mortality: a geographical perspective; Western Geographical Ser., vol. 23, 1986.

Reducing mortality from cardiovascular disease; British Columbia Geographical Ser., vol. 43, 1986.

331. GILBERT, R., GLEW, J., DALE, J., NEUMAN, C.M., DORN, P., HYATT, J.A., HOLLOWAY, A., NALDRETT, D., HAERTLING, J., Queen's Univ. (Geography):
Glaciolacustrine and glaciomarine environments, 1982-; Ph.D., theses (Glew, Dale, Neuman), M.Sc. theses (Dorn, Hyatt, Holloway, Haertling).

See:

A wind-driven, ice-push event in eastern Lake Ontario; J. Great Lakes Res., vol. 12, p. 326-331, 1986.

The biota of intertidal flats at Pangnirtung Fiord, Baffin Island, Northwest Territories; Le Naturaliste Canadien, vol. 113, p. 191-200, 1986.

Aeolian processes and landforms in glaciofluvial environments of southeastern Baffin Island, N.W.T., Canada; Aeolian Geomorphology, p. 213-235, 1986.

Aeolian sediments in arctic glaciomarine environments; Aeolian Geomorphology, 17th Ann. Geomorphology Symp., Program with Abstracts, p. 39, 1986.

Studies are ongoing to examine glaciomarine and lacustrine processes in lakes in western and arctic Canada, and in the fiords of the eastern Arctic. Work includes assessment of the differences in sedimentary environments of temperate and arctic glacial lakes, sedimentary processes of arctic fiords, animal/sediment relations in arctic glaciomarine settings, aeolian environments, periglacial processes in raised marine sediments and waste disposal in glaciomarine environments.

332. GREENWOOD, B., GHIONIS, G., OSBORNE, P.D., BAUER, B.O., Univ. Toronto (Geography, Geology), John Hopkins Univ.:
Morphodynamics of nearshore rhythmic topographies, 1982-88; M.Sc. theses (Ghionis, Osborne), Ph.D. thesis (Bauer).

See:

Sediment balance and bar morphodynamics in a multiple bar system, Georgian Bay, Canada; Proc. 1st Internat. Conf. on Geomorphology John Wiley and Sons Ltd., Chichester, 1987.

333. JOHNSON, P.G., Univ. Ottawa (Geography):
Geomorphological evolution of sub-basin of Kaskawulsh Glacier, 1986-.

The basin contains three glaciologically contrasting glaciers which have had different impacts on the geomorphological evolution of the basin. A surging, stagnating and active glacier all produced distructive elements of the geomorphic system.

334. LAURIOL, B., CINQ MARS, J., Univ. Ottawa (Géographie), Musée de l'homme, Ottawa:
Etude géomorphologique et paléoenvironnementale des massifs calcaires du nord du Yukon, 1983-.

Voir:

Caractéristiques des Karst arctiques du Yukon septentional; IXe Congrès International de Spéléologie, Barcelone, Août 1986 Proc., vol. 1, p. 164-167, 1986.

Le but des travaux est l'étude des remplissages des cavernes du nord du Yukon pour reconstituer les paléoenvironnements.

335. LUK, SHIU-HUNG, HAMILTON, H., Univ. Toronto Erindale College (Geography):
Soil strength, soil mositure and rainwash erosion, 1983-85; M.Sc. thesis (Hamilton).

See:

Experimental effects of antecedent moisutre and soil strength on rainwash erosion of two Luvisols, Ontario; Geoderma, vol. 37, p. 29-43, 1986.

Results from field experiments show that the influence of soil moisture on rainwash is at least in part expressed via soil strength. Further work in monitoring soil moisture and soil strength changes during rainfall is required.

336. PROVENCHER, L., DUBOIS, J.-M.M., MAILHOT, P., Université de Sherbrooke (Géographie):
Géomorphologie des littoraux lacustres et fluviaux, 1980-88.

Voir:

La gestion des réservoirs, les usagers et le schéma d'aménagement des MRC; 37e Conf. ann. Ass. Can. Ress. en Eau, 1986.

Développement d'une géomorphologie des littoraux laucstres et fluvieaux.

GEOPHYSICS/GÉOPHYSIQUE

ELECTRICAL/MÉTHODES ÉLECTRIQUES

338. BARLOW, R.B., Ontario Geol. Surv.:
Night Hawk geophysical test range, Ontario, 1981-.

During the 1986 field season, the Night Hawk geophysical test range near Timmins, Ontario, was utilized for testing, research, and instruction purposes by personnel from industry, universities, and government. Section staff carried out field work using the UTEM III electromagnetic system based on a standard (1 by 1 km) fixed source transmitter loop.

339. CHOUTEAU, M., BOUCHARD, K., École Polytechnique (Génie minéral):
Corrections de terrain bi-dimensionnel pour les levées magnétotelluriques, 1985-87; M.Sc.A. thesis (Bouchard).

See:

Two-dimensional terrain correction in magnetotelluric surveys; EAEG 48th Ann. Meeting, Ostende, Belgium, 1986.

Nous avons proposé une méthode de correction pour l'effet topographique en magnétotellurique. Cette méthode a éti testée sur divers cas.

340. CHOUTEAU, M., CHAKRIDI, R., École Polytechnique (Génie minéral):
Interprétation magnétotellurique en géologie complexe, 1987-90; thèse de doctorat (Chakridi).

L'interprétation des levées MT effectuées dans le Bouclier Canadien pose de sérieux problèmes; la géologie complexe distord les résultats obtenus. Le projet débute.

341. CHOUTEAU, M., QUENNEVILLE, J., École Polytechnique (Génie minéral):
Interprétation TBF par filtrage numérique, 1987-88; M.Sc.A. thesis (Quenneville).

Des techniques d'analyses de données TBF vont être développées pour mettre en évidence les sources. Une méthode de filtrage Wiener à multiples canaux sera proposée pour interpréter directement les résultats.

342. CHOUTEAU, M., VALLEE, M-A., École Polytechnique (Génie minéral):
Application des techniques de reconnaissance de formes à l'interprétation de données VLF aéroportées, 1987-89; thèse de doctorat (Vallee).

Le projet consiste en deux phases: 1) simulation de réponses VLF aéroportées et comparaison avec des cas réels; 2) test de l'applicabilité des techniques de reconnaissances de formes à l'interprétation. En cours depuis janvier 1987.

343. DYCK, A.V., Geol. Surv. Can.:
Borehole geophysics (electrical and magnetic techniques), 1974-.

344. HANNESON, J.E., HUXTER, R.S., Ontario Geol. Surv.:
Detection and mapping of basement conductors under areas covered by thick Huronian sedimentary rocks, 1986-90.

See:

The detection and mapping of basement conductors under areas covered by thick Huronian sedimentary rocks, District of Timiskaming; Ontario Geol. Surv., M.P. 132, p. 225-233, 1986.

A project to investigate the potential for detecting and tracing conductive strata in Precambrian rocks overlain by thick Huronian stratigraphy in the Moose Lake sub-basin area west of Cobalt has been initiated.

In this area, conductive horizons are largely contained within interflow sediments, which are in turn stratigraphically positioned within mafic volcanic rocks of Precambrian age. Techniques which would enable the tracing of these conductive horizons in the basement rocks beneath substantial thicknesses of Huronian sediments are of interest, both from a geological and an exploration viewpoint. Firstly, modelling of electromagnetic responses could reveal the depth of the Huronian sequence such that basement topography could be realized. Secondly, in some cases, there appears to be a spacial relationship between the interflow sediments and the contained conductive strata in basement rocks with cobalt-silver occurrences in the lower sequence of Huronian sediments above the unconformity. The study incorporates computer modeling of layered earth responses and plate-like targets, as well as the testing of field methods.

345. LAW, L.K., Geol. Surv. Can.:
Electromagnetic soundings of specific onshore and offshore regions in Western Canada.

346. SINHA, A.K., Geol. Surv. Can.:
Evaluation of two deep sounding E.M. systems, 1981-.

347. SLAWSON, W.F., WATANABE, T., Univ. British Columbia (Geophysics and Astronomy):
Power harmonics as an exploration tool, 1980-.

348. ST-HILAIRE, C., École Polytechnique (Génie minéral):
Application de la géophysique à l'étude quantitative d'une nappe, 1986-90; thèse de doctorat.

Calcul des concentrations d'un polluant dans une nappe à partir de mesures géophysiques de surface. Avancement des travaux. Etude sur modèle réduit. Vérification de la constante du facteur de formation. Etablissement des limites de concentration pour lesquelles ce facteur est constant.

EXPLORATION/PROSPECTION

349. CHARBONNEAU, B.W., Geol. Surv. Can.:
Regional interpretation of gamma-ray spectrometry, 1984-.

350. FORD, K.L., Geol. Can. Can.:
Applications of gamma-ray spectrometry, 1984-.

351. GRASTY, R.L., Geol. Surv. Can.:
Gamma-ray spectrometry (technique development), 1976-

352. MACNAB, R.F., Geol. Surv. Can.:
East coast potential fields, 1973-.

See:

Techniques for the display and editing of marine potential field data; Geol. Surv. Can., Paper 87-1A, p. 865-875, 1987.

GEOMAGNETISM-PALEOMAGNETISM/ GÉOMAGNÉTISME-PALÉOMAGNÉTISME

353. AJAKAIYE, D.E., HALL, D.H., ASHEIKAA, J., SEABROOK, R., Univ. Jos (Nigeria), Univ. Manitoba (Geological Sciences):
Aeromagnetic interpretation of the central crystalline shield and Benue trough, Nigeria, 1981-87.

See:

Aeromagnetic anomalies and tectonic trends in and around the Benue trough Nigeria; Nature, vol. 319, no. 6054, p. 582-4, 1986.

354. BOWER, M.E., Geol. Surv. Can.:
Ocean aeromagnetics, Arctic offshore, 1965-.

355. BROOME, J., Geol. Surv. Can.:
Magnetic interpretation techniques, 1984-.

356. BUCHAN, K.L., Geol. Surv. Can.:
Vertical movements of the Precambrian Shield, 1980-.

357. BUCHAN, K.L., Geol. Surv. Can.:
Paleomagnetism of Nipissing diabase and Abitibi dykes, Ontario and Quebec, 1982-.

358. BUCHAN, K.L., Geol. Surv. Can.:
Paleomagnetism of the Appalachian orogen of Eastern Canada, 1985-.

359. CHRISTIE, K.W., Geol. Surv. Can.:
Paleomagnetism and rock magnetism instrumentation and technological development, 1970-.

360. CURRIE, R.G., Geol. Surv. Can.:
Marine magnetic surveys, Pacific margin, 1980-.

361. FAHRIG, W.F., Geol. Surv. Can.:
Paleomagnetism of the dykes of west Greenland, 1972-.

362. FAHRIG. W.F., Geol. Surv. Can.:
Paleomagnetism of Proterozoic igneous and sedimentary rocks of the Precambrian Shield, 1984-.

See:

Paleomagnetism of Neohelikian Korok sheets and dykes, and a possible Mackenzie dyke from southeast of Ungava Bay; Geol. Surv. Can., Paper 86-1B, p. 65-71, 1986.

363. HALL, D.H., STROBEL, G.S., Univ. Manitoba (Geological Sciences):
Paleomagnetism in the Churchill Province, Leaf Rapids area, Manitoba, 1984-.

364. HALLS, H.C., Univ. Toronto (Geology, Erindale Campus):
Paleomagnetism of the Marathon dyke swarm, northern Ontario, 1983-.

A long-term project is an accumulation of paleomagnetic data from a rather ill-defined dyke swarm approximately centred on Marathon, Ontario, that trends in a northerly direction for several 100 km. About 20 sites collected from the Hemlo, Marathon, Geraldton and O'Sullivan Lake areas have been measured. The data are generally of good quality with both normal and reversed dykes being present. The reversed dykes have directions similar to those of the Kenora-Kabetogama dykes farther west.

365. HALLS, H.C., BURNS, K., BATTERHAM, P., BULLOCK, S., Univ. Toronto (Geology, Erindale Campus):
Aeromagnetic interpretation of dyke swarms in Tanzania, 1984-86.

See:

Mafic dyke swarms of Tanzania interpreted from aeromagnetic data; Geol. Assoc. Can., Sp. Paper 34, 1987.

A spectacular series of north-trend magnetic anomalies extends southwards from Lake Victoria for a distance of 500 to 800 km and continues for a further 500 km through Zambia. The anomalies are caused by dykes of two or possibly three distinct ages, some of which are major intrusions having widths of more than 200 m and lengths of 400 to 800 km.

366. HALLS, H.C., HUNTER, D.R., Univ. Toronto (Geology, Erindale Campus), Univ. Natal, South Africa (Geology):

Paleomagnetism and geochemistry of northwest-trending dykes in the Barberton Mountain Land of South Africa, 1986-.

Paleomagnetic and geochemical samples were collected from 14 dykes of a major swarm that cuts Archean rocks of Swaziland and neighbouring South Africa. Paleomagnetic measurements and an aerial photo study of the swarm are presently underway.

367. HALLS, H.C., JACKSON, K.C., Univ. Toronto (Geology, Erindale Campus), Imperial College, London, UK (Geology):
Paleomagnetism of mafic intrusive rocks from the Sverdrup Basin, Axel Heiberg and Ellesmere Islands, 1982-86.

Detailed thermal and AF demagnetization performed on about 500 samples from more than 100 sites collected from sills, dykes and lava flows in the Sverdrup Basin yield high quality paleomagnetic data. Results suggest that igneous activity was confined to the Cretaceous and that a displacement of the pole from the Mesozoic APW path indicates an anticlockwise movement of the terrain of less than 25 degrees. Much of this movement accompanied deformation during the Tertiary Eurekan Orogeny when Greenland rotated to open the Labrador Sea. The results can accommodate an earlier (Upper Cretaceous?) anticlockwise movment which is also suggested by paleomagnetic results from Spitzbergen.

368. HALLS, H.C., PALMER, H.C., Univ. Toronto (Geology, Erindale Campus), Univ. Western Ontario (Geophysics):
Paleomagnetism of the Keweenawan Powder Mill Group, Michigan and Wisconsin, 1982-86.

See:

Paleomagnetism of the Powder Mill Group, Michigan and Wisconsin: a re-assessment of the Logan Loop; J. Geophysical Res., vol. 91, p. 11,571-11,580, 1986.

Reversely magnetized sites from the eastern end of the Powder Mill volcanic range, where dips are shallow, yield a pole that lies at the apex of the Logan Loop. Near vertical strata toward the west if rotated to horizontal about presently observed strike yield a pole that lies on the eastern arm of the Logan Loop. A stratigraphic change from reversed to normal polarity near the base of the sequence, originally reported by Books (1972) is not confirmed. Normal flows have been found at two localities, only one of which is at the base of the sequence. A higher metamorphic grade of normally magnetized rocks suggests that their remanence is secondary. A major conclusion is that only a single reversed-to-normal polarity change characterizes southern Lake Superior Keweenawan volcanic sequences, in agreement with findings along the north shore.

369. HALLS, H.C., PALMER, H.C., Univ. Toronto (Geology, Erindale Campus), Univ. Western Ontario (Geophysics):
Paleomagnetism of the Matachewan dyke swarm and its bearing on the evolution on the Kapuskasing Structural Zone, 1984-.

Beginning with the initial study by Ernst and Halls (1984) and continuing with detailed sampling traverses along the White River-Hearst Road (Halls, 1984), Missinaibi Lake and Elsas CN rail line (Halls, 1985) and Chapleau area (Halls and Palmer, 1984, 1985) a total of 41 sites from 2.6 Ga-old Matachewan dykes and 15 sites from 2.0 Ga-old Kapuskasing dykes have been paleomagnetically measured. Major conclusions are that all dykes in the vicinity of the Kapuskasing Zone are relatively stable magnetically and petrologically fresh compared to those of the same trend and probable age that are that are farther away.

A marked anomaly, that may reflect inadequate sampling or some tectonic relationship with the KSZ, is that Matachewan dykes in the vicinity of the KSZ are normally magnetized whereas those outside are for the most part reversed. Work is continuing in an effort to delineate the extent of the normal swarm and its age relative to those of reversed polarity.

370. HALLS, H.C., SHAW, E.G., Univ. Toronto (Geology, Erindale Campus):
Paleomagnetism and structure of Precambrian dykes, eastern Lake Superior region and their use in estimates of crustal tilting, 1983-87; M.Sc. thesis (Shaw).

Using paleomagnetic and structural data on 2.6 Ga-old Matachewan dykes along the east coast of Lake Superior, a westward crustal tilt of about 60 degrees can be estimated. This tilting is associated with crustal subsidence along the 1.1 GA Central North American rift system. The potential of using dykes as deformation indicators is that estimates of crustal tilting can be obtained on a regional basis without reliance on the few isolated patches of Keweenawan supracrustal sequences.

371. HALLS, H.C., SOUTHWICK, D.L., Univ. Toronto (Geology, Erindale Campus), Minnesota Geol. Surv.:
Paleomagnetism and geochemistry of Middle Precambrian dykes from northwestern Ontario and Minnesota, 1982-86.

See:

Paleomagnetism, structure and longitudinal correlation of Middle Precambrian dykes from northwestern Ontario and Minnesota; Can. J. Earth Sci., vol. 23, p. 142-157, 1986.

A primary magnetization about 2.1 Ga old is found in a NW-trending dyke swarm that passes through Kenora, Ontario. It is especially well preserved in sites at the NW end of the swarm, which are the farthest away from the Penokean fold belt that truncates the dyke swarm at its southern end. The primary nature of the remanence is demonstrated using geochemistry to correlate individual dykes over distances in excess of 300 km. The remanence direction varies between dykes but remains constant along a dyke, sufficient proof that it was formed during initial cooling of the intrusion. A weak longitudinal increase in hydrous alteration, MgO content and degree of magnetic overprinting is found towards the southeast and may reflect increasing proximity to a Precambrian margin that underwent rifting, sedimentation and deformation during the time interval 2.2 to 1.6 Ga.

The results illustrate for the first time the potential of dyke swarms as sensitive indicators of how shield terrains may respond to events occurring around their margins. The dykes were derived from a single magma type which was tapped at two stages: an early stage when the magma contained 7.6% MgO and 0.9% TiO_2 and a late stage when the magma contained 5.5% MgO and 2.2% TiO_2.

372. IRVING, E., Geol. Surv. Can.:
Paleomagnetic studies in western Canada.

373. KNAPPERS, W.A., Geol. Surv. Can.:
Aeromagnetic survey — Laurentian Channel, 1985-.

374. KNAPPERS, W.A., Geol. Surv. Can.:
Vancouver Island and British Columbia coast, 1986-.
To carry out a medium sensitivity aeromagnetic survey comprising approximately 37,000 1/km over part of Vancouver Island, Queen Charlotte Strait-Johnstone Strait-Strait of Georgia to the B.C. shoreline.

375. LANGRIDGE, R.J., FARRAR, E., CLARK, A.H., ROY, J.L., Queen's Univ. (Geological Sciences), Geol. Surv. Can.:
A paleomagnetic study of the Arequipa Massif, southern Peru, 1982-; Ph.D. thesis (Langridge).

Studies of the Precambrian to present igneous, sedimentary and volcanic rocks exposed in this area are continuing using the facilities available at the Geomagnetic Laboratory in Ottawa.

376. LAPOINTE, P.L., Geol. Surv. Can.:
Paleomagnetism of the Canadian Arctic Archipelago.

377. LERBEKMO, J.F., Univ. Alberta (Geology):
Directional behavior of the earth's field near the Cretaceous-Tertiary boundary in Saskatchewan and Alberta, 1985-87.

One section in Saskatchewan being evaluated at present – to provide data on internal earth activity near the time of the Cretaceous-Tertiary boundary extinction event.

378. OLSON, D.G., Geol. Surv. Can.:
High resolution aeromagnetics (experimental surveys), 1968-.

379. PARK, J.K., Geol. Surv. Can.:
Paleomagnetic investigations of Precambrian rock sequences of selected areas or time intervals.

380. ROY, J.L., Geol. Surv. Can.:
Paleomagnetic investigation of Paleozoic rock units from Eastern Canada.

381. SAWATZKY, P., Geol. Surv. Can.:
High resolution aeromagnetics (instrumentation development), 1977-.

382. YOLE, R.W., IRVING, E., Carleton Univ. (Geology), Geol. Surv. Can.:
Vancouver Island Jurassic rocks and their signifiance in tectonic restorations, 1980-86.

See:

Tectonic rotations and translations in western Canada: new evidence from Jurassic rocks of Vancouver Island; Geophysical J. Royal Astronomical Sci., 1987.

Follow-up to earlier studies on paleomagnetism and tectonic history of Triassic Karmutsen Formation.

GEOTHERMAL/GÉOTHERMIQUE

383. WRIGHT, J.A., LOUDEN, K.E., Memorial Univ. (Earth Sciences), Dalhousie Univ. (Oceanography):
Marine geothermal measurements: Labrador Shelf and Labrador Sea, 1984-.
An evaluation of the geothermal flux across the shelf and slope in the Labrador Sea with the aims of assisting in constraining thermo-mechanical modelling of the margin and modelling the evolution of the Labrador Sea lithosphere.

GRAVITY/GRAVITÉ

384. COOPER, R.V., Geol. Surv. Can.:
Gravity mapping of Eastern Canada.

385. FEININGER, T., Geol. Surv. Can.:
Gravity studies of structure and origin of igneous intrusions.

386. GUPTA, V.K., WADGE, D.R., NAKASHIMA, A., Ontario Geol. Survey:
Gravity studies of mafic and ultramafic intrusions in the Lac des Iles area, Ontario, 1986-88.

See:

Gravity studies of mafic and ultramafic intrusions in the Lac des Iles area, District of Thunder Bay, Ontario Geol. Surv., M.P. 132, p. 220-221, 1986.

A gravity survey of the Lac des Iles area (1400 km^2) was carried out during the 1986 field season to aid in the regional geological interpretation of the mafic and ultramafic intrusive rocks in the area. The largest intrusive complex in this area is located approximately 80 km northwest of Thunder Bay, and is host to significant palladium-platinum mineralization. Some detailed gravity profiles were established in order to map specific features of several intrusions in the area.

387. HALL, D.H., Univ. Manitoba (Geological Sciences):
Gravity survey on the Sabaskong batholith, northwestern Ontario: Rainy River – Morson area, 1986.

388. HALLIDAY, D.W., Geol. Surv. Can.:
Gravity mapping of Arctic Island Channels.

389. LAMBERT, A., Geol. Surv. Can.:
Determination of regional and large scale deformations in Canada.

390. MILLER, H.G., Memorial Univ. (Earth Sciences):
Onshore-offshore geophysical investigations of Newfoundland geology.

See:

A geophysical interpretation of the onshore and offshore geology of the southern Avalon Terrane, Newfoundland; Can. J. Earth Sci., vol. 24, p. 60-69, 1987.

The project has expanded to investigate the nature of the Avalon/Gander boundary north and south of Newfoundland, and to investigate the depth extent of the Ackley Granite Suite astride the boundary. Publications on the northern Gander Terrane and the Ackley Granite Suite are currently submitted for publication. Several others are planned to incorporate 1985/86 field data.

391. MILLER, H.G., PEAVY, S.T., KILFOIL, G.J., Memorial Univ. (Earth Sciences):
Gravity and magnetic studies of St. George's Basin, 1984-87; M.Sc. theses (Peavy, Kilfoil).

The results of the gravity and magnetic data interpretation have been the subject of two M.Sc. theses. These data are being prepared for publication. The interpretation enables us to delineate the faulted basement beneath the St. George's Basin and provides good estimates of depth to basement in the area.

392. WOODSIDE, J., Geol. Surv. Can.:
Analysis of marine and satellite gravity and geoidal data, 1985-.

SEISMOLOGY AND PHYSICS OF INTERIOR/SISMOLOGIE ET PHYSIQUE DE L'INTÉRIEUR DE LA TERRE

393. ADAMS, J.E., Geol. Surv. Can.:
Seismotectonics and seismic hazard on the eastern and northern Continental margin.

394. BELL, J.S., Geol. Surv. Can.:
Regional geophysics of Mesozoic-Cenozoic of Baffin Bay-Labrador Margin, 1985-.

395. DOIG, R., McGill Univ. (Geological Sciences):
A method of paleoseismicity based on abnormal silting in lake sediments, 1983-.

See:

A method for determining the frequency of large-magnitude earthquakes using lake sediments; Can. J. Earth Sci., vol. 23, p. 930-937, 1986.

Abnormal silting events have been identified in the epicentral region of Charlevoix that correspond to the known earthquakes of 1663, 1791, and 1860. Two deeper layers may represent major earthquakes about 1060 and 600 A.D. The next objectives are to obtain deeper cores at Charlevoix, and to sample lakes in other seismically active areas.

396. GAGNE, R.M., Geol. Surv. Can.:
Shallow seismic, 1979-.

397. HAJNAL Z., KESMARKY, I., Univ. Saskatchewan (Geological Sciences):
Ice Island (Hobson's Choice) seismic data processing, 1986-87.

See:

Ice island lab shows petroleum potential; GEOS, no. 2, 1986.

398. HALL, J., Memorial Univ. (Earth Sciences):
Crustal seismology of the Atlantic seaboard, 1987-.

A CONVEX C1 mini-supercomputer has been installed as the root of a seismic reflection data processing centre, which will be used in the processing and interpretation of crustal reflection data from Eastern Canada and its marine margin. This links with ongoing activity in the Department (Quinlan, Miller, Wright) and elsewhere (AGC), including the Lithoprobe project.

399. HAMILTON, T.S., Geol. Surv. Can.:
The geology of the Strait of Georgia, British Columbia, 1982-.

See:

DC resistivity and CSAMT profiles of the southwestern Fraser River delta, British Columbia; Geol. Surv. Can., Paper 86-1B, p. 741-747, 1986.

400. JACKSON, H.R., Geol. Surv. Can.:
Arctic Ocean: seismic refraction and related geophysical measurements, 1978-.

See:

The Nares Strait gravity anomaly and its implications for crustal structure: Reply; Can. J. Earth Sci., vol. 23, no. 12, p. 2082, 1986.

401. JACKSON, H.R., Geol. Surv. Can.:
Seismic refraction along the Canadian Polar Margin, 1984-.

402. KEEN, C.E., Geol. Surv. Can.:
Marine deep seismic reflection studies – offshore eastern Canada, 1986-.

To acquire and interpret deep multichannel seismic reflection data across the continental margins of Eastern Canada and within contiguous marine regions such as the Gulf of St. Lawrence and Hudson Bay.

403. LAMBERT, A., Geol. Surv. Can.:
Relationship of tilt, strain and gravity variations to seismicity at Charlevoix, Quebec.

404. LAVERDURE, L., BAZINET, R., École Polytechnique (Génie minéral):
Détection par sismique réflexion d'un objet non magnétique et non conducteur enfoui dans le sol, 1985-88; thèse de doctorat (Laverdure).

Concevoir et fabriquer un appareil de sismique réflexion. Pour obtenir une haute résolution il faudra utiliser une bande de fréquence entre 1 et 10 Khz; en augmentant la fréquence nous pourrions augmenter la résolution tout en diminuant la profondeur d'investigation. De même, en diminuant la fréquence on pourra localiser des réflecteurs plus gros et plus profonds.

405. MACLEAN, B.C., Geol. Surv. Can.:
Interpretation of geophysical data from the Scotian Margin and adjacent areas as an aid to basin synthesis and estimation of hydrocarbon potential, 1984-.

406. OVERTON, A., Geol. Surv. Can.:
Ice island seismic reflection studies, 1984-.

407. PERSINGER, M.A., Laurentian Univ. (CINMER):
Multiple factors for forecasting rockbursts from non-traditional seismographic variables, 1986-87.

Detailed analyses of discrete and non-discrete episodes from daily seismographic records can be useful in estimating temporal windows in which seismic events and rockbursts might occur within the Sudbury Basin. However the scalar nature of the assessment limits specific localization.

408 PULLAN, S.E., Geol. Surv. Can.:
High resolution seismic (equipment development), 1980-

409. REID, I., Geol. Surv. Can.:
Seismic studies of continental margins and ice basins of the North Atlantic, 1980-

410. REID, I., Geol. Surv. Can.:
Seismicity studies of the eastern Canadian margin, 1983-.

411. RICHARDSON, K.A., Geol. Surv. Can.:
Geophysical studies – Nova Scotia Mineral Development Agreement, 1984-.

412. ROCHESTER, M.G., WU, W.J., Memorial Univ. (Earth Sciences):
Theoretical global geodynamics, 1961-.

See:

A variational principle for the subseismic wave equation; Geophysical J., vol. 86, p. 553-561, 1986.

Earth's third ocean, the liquid core; Eos, Trans. Amer. Geophys. Union, vol. 68, 1986.

413. SLAWSON, W.F., LISOWSKI, M., Univ. British Columbia (Geophysics and Astronomy):
Earthquarke recurrence rate, central Vancovuer Island, British Columbia, 1978-; M.Sc. thesis (Lisowski).

414. WRIGHT, J.A., LAIDLEY, T., ROBERTS, B., Memorial Univ. (Earth Sciences):
Seismic studies of the structure of Carboniferous basins in Newfoundland, 1982-88.

High resolution multichannel seismics are used to complement other geophysical and geological surveys to define the structure and thermal evolution of the Deer Lake basin.

OTHER/AUTRE

415. BRISTOW, Q., Geol. Surv. Can.:
Nuclear and analytical instrumentation, 1981-.

416. DAVIES, E.E., Geol. Surv. Can.:
Geophysical studies of the seafloor off western Canada.

417. GRIEVE, R., Geol. Surv. Can.:
Crustal genesis and evolution studies.

418. HUNTER, J.A., Geol. Surv. Can.: Beaufort Sea permafrost geotechnics, 1984-.

419. KATSUBE, T.J., Geol. Surv. Can.: Pore structure in crystalline rocks, 1981-.

420. KEEN, C.E., Geol. Surv. Can.: Rift processes and the development of passive continental margins, 1980-.

421. MCGRATH, P.H., Geol. Surv. Can.: Geophysical interpretation – Precambrian, 1984-.

422. MWENIFUMBO, C.J., Geol. Surv. Can.: Borehole geophysics applications to coal, 1982-.

423. PALACKY, G.J., Geol. Surv. Can.: Airborne resistivity mapping, 1985-.

See:

Delineation of bedrock topography at Val Gagné, Ontario, using seismic reflection techniques; Geol. Surv. Can., Paper 87-1A, p. 905-912, 1987.

424. RANALLI, G., ERNST, R.E., FADAIE, K., WILLIAMS, E.J., Carleton Univ. (Geology): Rheology and dynamics of lithosphere and mantle; Ph.D. theses (Ernst, Fadaie), M.Sc. thesis (Williams).

See:

Rheological stratification of the lithosphere; Tectonophysics, vol. 132, p. 281-295, 1987.

Rheology of the Earth – deformation and flow processes in geophysics and geodynamics; Allen and Unwin, London and Boston, 1987.

Problems at present being studied are: 1) mechanics of lithospheric decoupling; 2) Precambrian geodynamics; 3) role of superplasticity and Harper-Dorn creep in mantle rheology; and 4) creep of crystlas under small loads.

425. SCHWARZ, E.J., Geol. Surv. Can.: Geophysical interpretation Abitibi Belt, Ontario and Quebec, 1983-.

GEOTECHNIQUE/GÉOTECHNIQUE

ENGINEERING GEOLOGY/GÉOLOGIE DE L'INGÉNIEUR

426. ANNOR, A.B., JACKSON, R.D., EMR (CANMET): Underground nuclear waste repository, 1978-.

Publications in the form of Laboratory reports are available from CANMET/Mining Research Laboratories, Ottawa. Planned activities 1987/88: Investigations of 1) stress and temperature path dependence on mechanical properties and 2) size effects on rock joint properties.

427. BERARD, J., DURAND, B., École Polytechnique (Génie minéral): Étude de l'efficacité des additifs minéraux pour contrer les réactions alcalis-granulats dans les bétons, 1987-89; thèse de doctorat (Durand).

Voir:

Use of geo composition as a criterion for diagnosis of alkali-aggregate reactivity in concrete containing siliceous limestone aggregate; Rilem, Matériaux de construction Dunod Paris, 1987.

Comparison of the effectiveness of four mineral admixtures to counteract alkali-aggregate reaction; Compte-rendus du VIII congrés International sur les réactions alcalis-granulats, Ottawa, 1987.

Comme il y a plusieurs types de granulats à béton réactifs en présence des alcalis du ciment portland, nous tentons, avec succès, d'évaluer le rôle des ajouts minéraux (surtout des déchets industriels) afin d'envoyer ces réactions néfastes.

428. CHAGNON, J.Y., LOCAT, J., Université Laval (Géologie): Geological evaluation of the seismicity of the Charlevoix area, Quebec, 1985-88.

Voir:

The effects of seismic activity on the soils of the Charlevoix area, Quebec, Canada; Procs. Internat. Symp. on natural and man-made hazards, 1987.

Le but du projet est d'évaluer activité sismique dans Charlevoix pour une periode couvrant les 10,000 dernières annèes viz l'étude des effets des seismes sur les sol. Le projet est complété à 40%.

429. CRUDEN, D.M., LU, Z.Y., Univ. Alberta (Geology): Geotechnical characterization of materials in slope movements in the Cordillera; M.Sc. thesis (Lu).

To characterize materials in slope movements in the Canadian Cordillera sufficiently for approximate stability analyses of the moving slopes to be undertaken.

430. DALLIMORE, S.R., Geol. Surv. Can.: Geological and geotechnical conditions, Beaufort Sea coastal zone, 1985-.

See:

Ground probing radar investigations of massive ground ice and near surface geology in continuous permafrost; Geol. Surv. Can., Paper 87-1A, p. 913-918, 1987.

431. DOME MINES LIMITED (South Porcupine, Ontario), EMR (CANMET): In situ determination of dewatered tailings fill properties in Ontario mines (Part I), 1986-.

See:

Proc. 2nd Internal. Conf. Radioactive Waste Management, Winnipeg, Manitoba, p. 311-318, 1986.

432. DOME MINES LIMITED (South Porcupine, Ontario), EMR (CANMET): Liquefaction potential of dense backfill (Part III), 1986-.

433. EVANS, S.G., Geol. Surv. Can.: Landslide hazard in the Canadian Cordillera, 1983-.

See:

Surface displacement and massive toppling on the northwest ridge of Mount Currie, British Columbia; Geol. Surv. Can., Paper 87-1A, p. 181-189, 1987.

A rock avalanche from the peak of Mount Meager, British Columbia; ibid., p. 929-934, 1987.

434. FALCONBRIDGE LIMITED (Falconbridge, Ontario), EMR (CANMET):
In situ properties of backfill alternatives in Ontario mines, 1986-.

435. FALCONBRIDGE LIMITED (Falconbridge, Ontario), EMR (CANMET):
In situ monitoring and computer modelling of a cemented sill mat and confines during tertiary stage pillar recovery, 1986-.

436. HEGINBOTTOM, J.A., Geol. Surv. Can.:
Slope processes and cryogenic movements, Arctic Islands, 1977-.

437. HUDSON BAY MINING AND SMELTING CO. LIMITED (Flin Flon, Manitoba), EMR (CANMET):
Delayed backfill consolidation in Manitoba mines, 1986-.

438. INCO LIMITED (Copper Cliff, Ontario),:
In situ determination of dewatered tailings fill properties in Ontario mines (Part II), 1986-.

439. LUTERNAUER, J.L., Geol. Surv. Can.:
Potential geologic hazards to development – seafloor and shallow subbottom of Queen Charlotte Sound, British Columbia, 1984-.

See:

Titaniferous placers on the central contental shelf off western Canada; Geol. Surv. Can., Paper 86-1B, p. 849-852, 1986.

440. LUTERNAUER, J.L., Geol. Surv. Can.:
Geoarchitecture of the Fraser River Delta area, British Columbia, 1986-.

Defining the framework geology, stratigraphy, Neogene history, paleogeography and susceptibility of earthquake damage.

441. SAVIGNY, K.W., Univ. British Columbia (Geological Sciences):
Geological controls on mass movements in the Peace River valley of Alberta and British Columbia, 1986-.

To assess geological factors which contribute to large mass movements but are currently not considered in engineering analysis.

442. SAVIGNY, K.W., Univ. British Columbia (Geological Sciences):
Mass movements and their influence on the pipeline industry in Western Canada, 1987-.

To improve awareness of mass movements among practitioners in the pipeline industry, to identify where mass movement problems are likely to occur, and to assess alternative ways to dealing with mass movement problems affecting pipelines.

443. SAVIGNY, K.W.,
BUCHANAN, P.N., Univ. British Columbia (Geological Sciences):
Factors controlling initiation of debris flows, Whatcom Co., Washington, 1983-87; M.Sc. thesis (Buchanan).

444. TANGUAY, M.G.,
BLANCHARD, C., École Polytechnique (Génie minéral):
Carte géotechnique de Laval, Québec, 1983-87; thèse de maîtrise (Blanchard).

Etablir la carte géotechnique des sols et du roc pour tout le territoire de Laval, P.Q. (Ile Jésus).

PERMAFROST/PERGÉLISOL

445. GOODRICH, L.E.,
BAKER, T.H.W., National Research Council of Canada (Instit. Research in Construction):
Ground thermal regime, 1981-87.

See:

Measurement of soil water content using the combined TDR – thermal conductivity probe; Can. Geotechnical J., vol. 24, no. 1, 1987.

To increase knowledge of the thermal behaviour of the ground; its response to natural climatic changes and varying surface conditions as well as to human influences. To establish the criteria required for the thermal design of engineering works constructed on or in the ground through the development and evaluation of numerical models for ground temperature calculations as well as work related to the measurement of thermal properties of earth materials.

446. HARRY, D.G., Geol. Surv. Can.:
Characterization of ground ice occurrence in northern Canada, 1984-.

447. HEGINBOTTOM, J.A., Geol. Surv. Can.:
Properties and distribution of permafrost and ground ice, 1983-.

448. JOHNSTON, G.H.,
BAKER, T.H.W.,
PARAMESWARAN, V.R.,
GOODRICH, L.E., National Research Council of Canada (Instit. Research in Construction):
Permafrost engineering, 1978-88.

See:

Bearing capacity calculations for piles in permafrost; Proc. 4th Internat. Conf. Cold Regions Engineering, Anchorage, Alaska, p. 751-759, 1986.

To develop criteria for the design and construction of foundations, embankments and engineering facilities and structures in permafrost.

449. KURFURST, P.J., Geol. Surv. Can.:
Comparison of geotechnical and geophysical properties of arctic seabed sediments, 1982-.

See:

Cone penetration tests of the nearshore zone sediments off Richards Island, Northwest Territories; Geol. Surv. Can., Paper 87-1A, p. 939-944, 1987.

450. LEWKOWICZ, A.G.,
GRAHAM, P., Univ. Toronto, Erindale College (Geography):
Measurement and simulation of permafrost degradation on slopes, Arctic Canada, 1983-.

See:

Rate of short-term ablation of exposed ground ice, Banks Island, Northwest Territories, Canada; J. Glaciology, vol. 32, p. 511-519, 1986.

451. LEWKOWICZ, A.G., YOUNG, K., Univ. Toronto, Erindale College (Geography):
Hydrology of a permanent snowbank in a permafrost area, Melville Island, N.W.T., 1986-; M.Sc. thesis (Young).

To examine the energy balance and hydrology of a permanent snowbank, and its effects on maintaining permafrost at its base.

452. PARAMESWARAN, V.R., BAKER, T.H.W., National Research Council of Canada (Instit. Research in Construction):
Physical and mechanical properties of frozen ground, 1981-87.

To study the physical and mechanical properties of freezing and frozen earth materials under various conditions of temperature, pressure and rate of loading.

453. PILON, P.A., Geol. Surv. Can.:
Characterization of regional permafrost distribution.

454. TAYLOR, A.E., Geol. Surv. Can.:
Offshore permafrost beneath the Beaufort Sea.

455. TAYLOR, R.B., Geol. Surv. Can.:
Permafrost processes in Arctic beaches, 1983-.

ROCK MECHANICS/MÉCANIQUE DES ROCHES

456. BÉTOURNAY, M., EMR (CANMET):
Rock mass characterization, 1984-.

See:

A case study of surface crown pillars: the Niobec Mine; 20th U.S. rock mechanics symp., 1987.

A design process for surface crown pillars of hard rock mines; 88th Ann. General meeting CIM, 1986.

Summary of 24 surface crown pillar case studies; 89th Ann. General meeting CIM, 1987.

Éléments géomécaniques de récupération de pillers de surface; 3ième colloque sur le contrôle de terrain de l'ammq, 1987.

To gather relevant information from all knowledgeable sources, develop new information to address the characteristics of near-surface rock masses. In particular, address the subject of surface crown pillars in this regard.

457. CRUDEN, D.M., CASSIE J., HU, X.O., Univ. Alberta (Geology):
Stability of natural slopes in rock; M.Sc. theses (Cassie, Hu).

Detailed mapping of selected sites at which large downslope movements in rock are occurring or have occurred has continued. Laboratory work has provided a theoretical basis for these studies.

458. FOSSUM, A.F., BRANDER, R.R., CHIESLAR, J.D., TAMMEMAGI, H.Y., YU, Y.S., RE/SPEC Ltd. Calgary, EMR (CANMET):
To develop a numerical modelling package for designing underground openings in potash, 1984-86.

See:

Computer simulation of a room and pillar mining system in a Canada potash mine; Proc. Internat. Conf. Computational plasticity, Barcelona, Spain, 6-10 April 1987, Part II, p. 1663-1676, 1987.

459. NEIMI, B., DIERING, T., PAGE, C., YU, Y.S., INCO, Thompson, EMR(CANMET):
Geotechnical database for ground control in underground mines, 1984-89.

460. NEIMI, B., MASS, A., PAGE, C., YU, Y.S., INCO, Thompson, EMR (CANMET):
To develop vertical block method design guidelines for a steeply dipping orebody, 1984-89.

461. ROSS, J.V., Univ. British Columbia (Geological Sciences):
Strain partitioning in synthetic anhydrite/halite mylonites, 1985-87.

See:

Textural evolution of synthetic mylonites; Tectonophysics, vol. 1780, 1987.

462. ROSS, J.V., Univ. British Columbia (Geological Sciences):
Flow Law(s) and mechanisms of behaviour of pyroxene granulite experimentally deformed under lower crustal conditions, 1986-.

463. ROSS, J.V., Univ. British Columbia (Geological Sciences):
Rheologic characteristics of granite rocks experimentally deformed under Greenschist and Amphibolite facies conditions, 1986-.

464. ROSS, J.V., BUSTIN, R.M., Univ. British Columbia (Geological Sciences):
Rheology of anthracite and variation of vitrinite reflectance with strain, 1986-.

See:

Vitrinite reflectance and strain in anthracite; J. Coal Petrol., 1987.

SOIL MECHANICS/MÉCANIQUE DES SOLS

465. BOZOZUK, M., LAW, K.T., National Research Council of Canada (Instit. Research in Construction):
Deep foundations and excavations, 1985-87.

To develop design criteria for deep foundations and excavations, and for negative and positive skin friction for pile foundations in clays.

466. HUGHES, O.L., Geol. Surv. Can.:
Surficial geology and land classification, Mackenzie Valley Transportation Corridor, 1971-.

467. LAW, K.T., BOZOZUK, M., National Research Council of Canada (Instit. Research in Construction):
Deformation and stresses in soils, 1972-87.

To study the deformation behaviour of soils and to establish the method for predicting stresses, rates of strain, deformations and change of soil resistance under sustained loading caused by structures and other engineering works.

468. PALMER, J.H.L., National Research Council of Canada (Instit. Research in Construction):
Tunnelling and underground construction, 1983-87.

To encourage the development of new tunnelling techniques; to develop design criteria for tunnels in soft ground and in near-surface rock formation primarily by monitoring the behaviour of structures during and subsequent to construction; to keep in touch with and respond to the geotechnical needs of designers of underground structures.

469. PALMER, J.H.L., SVEC, O.J., National Research Council of Canada (Instit. Research in Construction):
Ground heat storage, 1978-87.

To study the structural requirements and thermal efficiency aspects of in-ground seasonal heat storage schemes. To develop efficient use of the ground as a source for heating or cooling in conjunction with heat pumps. Retrofit and new construction will be considered varying from sizes suitable for single family dwellings to mini-utility.

470. SVEC, O.J., GOODRICH, L.E., National Research Council of Canada (Instit. Research in Construction):
Frost action in soils.

To study frost action processes and develop good practice procedures for the design of structures and utilities.

SNOW AND ICE/NEIGE ET GLACE

471. FREDERKING, R.M.W., SAYED, M., National Research Council of Canada (Instit. Research in Construction): Ice-structure interaction, 1980-87.

See:

Ice stress measurements in a rubble field surrounding a caisson retained island; Proc. 1st Conf. Ice Technology, Cambridge, Mass., p. 255-262, 1986.

On modelling of ice ridge formation; Proc. IAHR Symp. on Ice, vol. 1, p. 591-602, 1986.

Model tests of the ridge building process; ibid., p. 603-614, 1986.

Ice interaction with Adams Island, Winter 1984-85; ibid., 1986.

Static and dynamic ice loads on the Yamachiche Bend Lightpier; ibid., 1986.

Ice cover deformation at Adams Island, Winter 1982-1983; Can. Geotechnical J., vol. 23, no. 3, p. 346-354, 1986.

To establish design criteria for structures subjected to forces due to river, lake or sea ice.

472. MCCLUNG, D.M., National Research Council of Canada (Instit. Research in Construction): Geotechnical aspects of snow mechanics, 1979-87.

To study the mechanical properties of snow necessary for estimation of creep pressures on structures; to define snow failure characteristics related to avalanche release and control phenomena.

473. MCCLUNG, D.M., SCHAERER, P.A., National Research Council of Canada (Instit. Research in Construction): Avalanche engineering, 1974-87.

See:

An equation for calculating snow avalanche run-up against barriers; Internat. Symp. on Avalanche Formation, Movement and Effects, Davos, Switzerland, 1986.

To develop the information needed for the location, design and maintenance of engineering works and developments in avalanche areas.

474. PERLA, R., Environment Canada (National Hydrology Res. Instit.): Hydrology of the mountain snowpack, 1985-88.

See:

Preparation of serial sections in dry snow specimens; J. Microscopy, vol. 14, no. 1, p. 111-114, 1986.

Dilution method for measuring liquid water in snow: field tests in a subalpine snowpack; Proc., Workshop on Snow Property Measurements, Lake Louise, National Research Council of Canada, 1987.

Stereological and topological parameters were derived from sections and serials prepared in seasonal snow samples collected from mountain snowpacks. Computer algorithms were developed to describe specimen microstructure. Theoretical models of snow metamorphism and sintering were developed in terms of the section and serial parameters.

475. SCHAERER, P.A., MCCLUNG, D.M., National Research Council of Canada (Instit. Research in Construction): Avalanche hazard evaluation, 1985-87.

See:

Avalanche involvements in Canada, 1985-86; Winter Avalanche News, no. 21, p. 2-3, 1986.

To develop techniques and criteria for the evaluation of operational daily avalanche hazards.

476. SINHA, N.K., National Research Council of Canada (Instit. Research in Construction): Engineering behaviour and properties of fresh water ice, 1975-86.

See:

Some observations of strength and deformation of iceberg ice; Workshop on Extreme Ice Features, Banff, Alberta, Nov. 3-6, 1986.

Engineering applications of thermal imagery and impulse radar data for the analysis of ice integrity for transportation purposes; Proc. Amer. Soc. for Photogrammetry and Remote Sensing, Alaska, p. 38-48, 1986.

Effective Poisson's ratio of isotropic ice; Proc. Amer. Soc. Mech. Eng., 6th Offshore Mechanics and Arctic Engineering Symp. vol. 4, p. 189-195, 1987.

Core temperature measurements on three Arctic icebergs; ibid., p. 103-107, 1987.

477. SINHA, N.K., National Research Council of Canada (Instit. Research in Construction): Engineering behaviour and properties of Sea Ice, 1980-87.

See:

Mechanical properties of shelf ice; Workshop on Extreme Ice Features, Banff, Alberta, Nov. 3-6, 1986.

Young Arctic frazil sea ice: field laboratory strength tests; J. Materials Sci., vol. 21, no. 5, p. 1533-1546, 1986.

In situ assessment of drilling platform sea ice strength using a borehole jack; Proc. 39th Can. Geotechnical Conf., Ottawa, p. 153-157, 1986.

The borehole jack. Is it a useful Arctic tool?; Proc. 5th Internat. Offshore Mechanics and Arctic Engineering Symp., vol. 4, pp. 328-335, 1986.

Recent advances in ice mechanics in Canada; Proc. 6th Internat. Offshore Mechanics and Arctic Engineering, Amer. Soc. Mech. Eng., Sp. Vol.: Advances in Ice Mechanics, p. 15-35, 1987.

To develop an understanding of the growth, morphology, structure and physical properties of sea ice required for improved design of structures exposed to sea ice in Canada.

478. HOLDSWORTH, G.,
DEMUTH, M., Environment Canada (National Hydrology Res. Instit.):
Ice core – climate change, 1979-90.

See:

Evidence of a link between atmospheric thermonuclear detonations and nitric acid; Nature, vol. 324, p. 551-553, 1986.

Acid anions have been measured through major volcanic events and significant lags between nitrate, sulfate and the halides are noticed. A detailed ion balance was carried out on a section of core to help interpret the chemistry of the core in general. The carbon dioxide content of air bubbles was measured at various depths (ages).

479. HOLDSWORTH, G.,
DEMUTH, M.,
LETREGUILLY, A., Environment Canada (National Hydrology Res. Instit.):
Glacier hydrology.

Peyto Glacier mass balance, for 1966-1984, is almost entirely related to summer temperature, Sentinel mostly to winter precipitation and Place to both. Their equilibrium line has the same correlation with met data as the mass balance. Several visits were made to Peyto Glacier in 1985 and 1986 to determine mass balance and survey the glacier.

480. HOLDSWORTH, G.,
FOGARASI, S., Environment Canada (National Hydrology Res. Instit.):
Teleconnections between long-term glacier mass balance variations on Mount Logan and long-range, spatially-averaged precipitation variations, 1986-90.

Preliminary analysis of the top 65 m of the ice core record from Mount Logan (last 100 years) shows that the precipitation time series correlates with similar length data from Siberia. This climatic teleconnection is now under further investigtion.

481. JOHNSON, P.G., Univ. Ottawa (Geography):
Glaciological contrasts in a sub basin of the Kaskawulsh Glacier system, 1986-88.

Investigation of the causes of the glaciological contrasts between three small glaciers in a northern tributary basin of the Kaskawulsh system. Geological and climatological variables will be monitored and glacier mass balance and movement measured.

482. JOHNSON, P.G., Univ. Ottawa (Geography):
Variations in discharge and suspended sediment regimes of three contrasting glacierized components of a drainage basin, 1986-88.

Measurement of the variations in discharge regime and suspended sediment load from a surging, stagnant and active glacier which all provide input to a glacier ice dammed lake. Major objective is to explain differences in the discharge regimes.

483. JOHNSON, P.G., KASPER, J., Univ. Ottawa (Geography):
Physical limnology and sedimentology of glacier ice dammed lake, Kaskawulsh Glacier, Yukon, 1986-88; M.A. thesis (Kasper).

Measurement of temperature, current and suspended sediment profiles in lake during filling. Recording of mechanism and rate of drainage of lake and sampling of lake bed sediments for comparison with older higher level sediments.

484. LAURIOL, B., Univ. Ottawa (Géographie):
Les plaques de neige en été dans l'Arctique canadien, 1982-.

See:

The residual snow cover in the Canadian Arctic in July: a means to evaluate the regional maximum snow depth in winter; Arctic, vol. 39, no. 4, p. 309-315, 1986.

Le but de ces travaux est de comprendre la distribution et l'évolution pendant un été des plaques de neige à travers l'arctique.

485. LUK SHIU-HUNG,
ABRAHAMS, A.D.,
PARSONS, A.J., University of Toronto, Erindale College, SUNY Buffalo, Keele, UK (Geography):
The hydraulics of overland flow on desert hillslopes, 1985-86.

See:

Resistance to overland flow on desert hillslopes; J. Hydrology, vol. 88, p. 343-363, 1986.

A simple rainfall simulator and trickle system for hydrogeomorphological research; Physical Geography, vol. 7, p. 344-356, 1986.

Results from field experiments in Tombstone, Arizona show that the conventional f-Re (Darcy-Weisbach) friction factor (Renolds Number) relation for shallow flow over a plane bed does not apply to desert hillslopes. Additional experiments on a whole hillslope will be conducted.

486. MENZIES, J., Brock Univ. (Geology, Geography):
Subglacial bedorms and subglacial sedimentation processes, 1986-.

See:

Inverse-graded units within till in drumlins near Caledonia, southern Ontario; Can. J. Earth Sci., vol. 23, no. 6, p. 744-86, 1986.

487. MOKIEVSKY-ZUBOK, O.,
Environment Canada (National Hydrology Res. Instit.):
Water management of glacierized basins.

Mass balance measurements continued on Place (-1.31 m H2O), Sentinel (-0.32 m H2O) and Helm Glaciers (-1.33 m H2O). Although mass balance measurements were discontinued in the Bridge River watershed, a Data Collection Platform (DCP) there continued to provide meteorological and hydrological data.

488. OMMANNEY, C.S.L.,
Environment Canada (National Hydrology Res. Instit.):
Snow and ice formation.

See:

Mapping Canada's glaciers since 1965; Proc. Symp. on Glacier Mapping and Surv., Reykjavik, Ann. Glaciology, vol. 8, p. 132-134, 1987.

Canadian glacier variations, mass balance and special events, 1980-1985; 1980-1985 Quadrennial Rept. World Glacier Monitoring Service, ETH, Zurich, November, 215 p., 1986.

All the glacier inventory and other glacier records have been transferred from Ottawa to Saskatoon. They are being reorganized to make them more accessible to users. The loss of positions assigned to the glacier inventory means that this project is now essentially terminated.

489. WANKIEWICZ, A., Environment Canada (National Hydrology Res. Instit.):
Land drainage snowmelt studies.

The effects of drainage improvements on downstream flooding has been investigated at field sites near Winnipeg. The observations were made over two years at two adjacent research basins — one poorly drained, and the other with improved drainage, both intensively instrumented with dataloggers. Channel snow blockage was shown to control the detailed response of small (70 km^2) basins to snowmelt input.

Indiviudal fields drained suddenly in a sequence that followed the opening of the snow blocked drains. The possibility of incorporating these effects in a runoff model is under investigation.

HYDROGEOLOGY/HYDROGÉOLOGIE

490. DAVÉ, N.K., LIM, T.P., EMR (CANMET):
Hydrogeochemical investigations of inactive sulphide tailings: Noranda, Quebec, 1986-91.

See:

Geophysical and biohydrogeochemical investigations of inactive sulphide tailings basins, Noranda, Quebec, Canada; Proc. 1986 National Symp. Mining, Hydrology, Sedimentology and Reclamation, Univ. Kentucky, 1986.

Geophysical and biohydrogeochemical investigations were carried out at an inactive copper-zinc mine tailing site, Waite Amulet, near Noranda, Quebec, Canada. Geophysical investigations consisted of seismic, electromagnetic conductivity and electrical resistivity surveys to determine the thickness of the layers above bedrock and to map conductivity variations within the tailings and the immediate outlying area. Biohydrogeochemical investigations consisted of installing multilevel piezometer nests to determine groundwater flow patterns and porewater chemistry, obtaining solid core samples and characterizing for physical, chemical and mineralogical parameters, and iron oxidizing and sulphate reducing bacterial counts.

The geophysical survey indicated a bedrock ridge extending under the tailings from the northeastern outcrop which may act as a porewater boundary layer. The survey also indicated a 2 to 20 m clay layer underlying the main tailings dam. Preliminary results of the saturated zone porewater chemistry have indicated three major zones of high electrical conductivity varying between 1000 to 12,000 μs and pH between 3.4 to 8. Lower pH and high metal and sulphate concentrations were obtained in a shallow zone near the water table. With depth, the concentration of metal and sulphate ions decreased and pH increased below the water table. The underlying clay layer is relatively impervious and most of the seepage from the tailings is probably exiting from the sides of the impoundment dam.

In the unsaturated zone, the pH increased with depth from 3 to 6. Bacterial analysis showed a strong presence of **Thiobacillus Ferrooxidans** in the upper 2 m of tailings (8000 to >100,000 MPN/g). Sulphide reducing bacteria were not detected in a majority of samples below the water table.

491. FREEZE, R.A., MASSMANN, J., SPERLING, T., JAMES, B., Univ. British Columbia (Geological Sciences):
Risk-based engineering design in hydrogeological and geotechnical projects; Ph.D. theses (Massmann, Sperling), M.A.Sc. thesis (James).

See:

Groundwater contamination from waste management sites – The interaction between risk-based engineering design and regulatory policy, 1) Methodology; Water Res., vol. 23, no. 2, p. 351-367, 1987; 2) Results; ibid., p. 368-380, 1987.

492. MICHEL, F.A., Carleton Univ. (Geology):
Evaluation of potential bedrock aquifers for large industrial users in the Ottawa area, Ontario, 1986.

As an energy conservation measure, the potential of using groundwater for heating and cooling purposes by large industrial users is being investigated.

493. MICHEL, F.A., HAMILTON S., Carleton Univ. (Geology):
Evaluation of mineral resource potential in the proposed extension areas of Nahanni National Park using groundwater geochemistry, 1986; M.Sc. thesis (Hamilton).

To investigate the potential of using groundwater chemistry as a tool in mineral resource exploration. Specifically, the project will examine whether non-outcropping zones of mineralization can be detected using the hydrogeochemical approach.

494. SKLASH, M.G., BRAITHWAITE, S., BALSDON, J., MWANGI, M., MASON, S., OBRADOVIC, M., Univ. Windsor (Geology):
Applied isotope hydrogeology, 1986-.

See:

Storm runoff generation in humid headwater catchments 2. A case study of low-order stream response; Water Res. Res., vol. 22, p. 1273-1282, 1986.
An isotopic and geochemical study of snowmelt runoff generation in a small Arctic Watershed; Hydrological Processes, vol. 1, p. 15-30, 1986.

Several projects are in progress which use environmental isotopes to solve hydrogeologic problems such as: aquifer connections, ages of groundwater, the role of groundwater in acid runoff events, leachate tracing, etc.

495. SMITH, L., CAHN, L., Univ. British Columbia (Geological Sciences):
Development of guidelines for design of sampling programs to predict groundwater discharge, 1987; M.Sc. thesis (Cahn).

496. SMITH, L., FORSTER, C., Univ. British Columbia (Geological Sciences):
The influence of groundwater flow on thermal regimes in mountainous terrain, 1984-; Ph.D. thesis (Forster).
See:
The influence of groundwater flow on thermal regimes in mountainous terrain; Proc. 11th Stanford Geothermal Workshop, Stanford, California, 1986.

497. SMITH, L., MASE, C., Univ. British Columbia (Geological Sciences):
The effects of frictional heating on the thermal, mechanical and hydrologic response of a fault, 1986; Ph.D. thesis (Mase).

498. SMITH, L., MASE, C., Univ. British Columbia (Geological Sciences):
Stochastic modeling of transport processes in fractured media.

499. SMITH, L., WOODBURY, A., Univ. British Columbia (Geological Sciences):
Simultaneous inversion of thermal and hydrogeologic data, 1984-87; Ph.D. thesis (Woodbury).

500. WILSON, M.A., BENNETT, R.W., Saskatchewan Geol. Surv.:
Evaluation of Saskatchewan's heavy oil reserves, 1985-86.

MARINE GEOSCIENCE/OCÉANOGRAPHIE

501. AL-AASM, I., BLAISE, B., BORNHOLD, B.D., Univ. Ottawa (Geology), Geol. Surv. Can.:
Stable isotope studies of planktonic foraminifera and carbonate nodules from cores in the northeastern Pacific Ocean, 1986-87.

502. BUCKLEY, D.E., Geol. Surv. Can.:
Environmental geology of the deep ocean, 1979-.

503. CARBOTTE, S.M., DIXON, J.M., FARRAR, E., DAVIES, E.E., RIDDIHOUGH, R.P., Queen's Univ. (Geological Sciences), Geol. Surv. Can.:
The geological and geophysical characteristics and geotectonic significance of the Tuzo Wilson Knolls, Northern Explorer triple junction, 1984-86; M.Sc. thesis (Carbotte).

504. CHASE, R.L., MICHAEL, P.J., SCOTT, S.D., MCCONACHY, T.F., BINNS, R.A., WHITFORD, D.J., FINDLAYSON, E., GORTON, M., BURNE, R., Univ. British Columbia (Geological Sciences), Univ. Toronto (Geology), CSIRO, PNG Geol. Surv., BMR:
XRF analyses of western Woodlark Basin, 1986-89.

See:

Eos, vol. 67, no. 44, 1986.

Volcanic rocks dredged from basins at the western end of Woodlark spreading centre, collected on the PACLARK I expedition (April 1986) are to be analysed at UBC for major and trace elements, and water.

505. CHASE, R.L., MICHAEL, P.J., SHEA, G.T.F., SCOTT, S.D., FRANKLIN, J.M., JOHNSON, H.P., BOTROS, M., Univ. British Columbia (Geological Sciences, Oceanography), Univ. Toronto (Geology), Geol. Surv. Can., Univ. Washington:
Petrology and tectonics of Explorer Ridge, 1984-89; M.Sc. thesis (Shea).

Basalts collected during CASM cruises 3 to 6, by submersible and dredge, have been analysed for major and trace elements and Sr isotopes. Investigation is still underway. Further surface cruises are planned for 1987 and beyond.

506. DENTON, A.W.S., CHASE, R.L., PEDERSEN, T.F., BARRETT, T.J., Univ. British Columbia (Geological Sciences, Oceanography), Univ. Toronto (Geology):
Quaternary sedimentation at Tuzo Wilson Seamounts, northwestern Pacific, 1984-86; M.Sc. thesis (Denton).

Samples from 7 short sediment cores were analyzed by XRF for major elements, trace elements and halogens (I, Br, Cl). C and N determined by CHN analyzer, carbonate C with coulometer. Sedimentation is dominated by ferrigenous-input; one core penetrated Holocene-Pleistocene boundary; I and Br distribution is closely related to C (organic); Cu, Ni, Zn distribution is influenced by biogenic productivity.

507. FORBES, D.L., Geol. Surv. Can.:
Sediment dynamics and depositional processes in the Coastal Zone, 1982-.

508. GREENWOOD, B., BOWEN, A.J., OSBORNE, P.D., SELA, N., Univ. Toronto (Geography, Geology), Dalhousie Univ. (Geology):
Nearshore sediment transport, 1986-89; Ph.D. theses (Osborne, Sela).

Cooperative research between Toronto and Dalhousie has been initiated to carry out prototype experiments in a range of coastal environments (non-tidal, tidal, barred, non-barred, and of varying slopes, grain size and energy levels) in order to:

1) use and further develop where necessary, new instruments for monitoring sediment transport (optical backscatter sensor, acoustic suspended sediment profilers) and the dynamics of the bottom boundary (high resolution remote tracking sonar, jauge nucleaire);

2) determine the vertical and horizontal structures of the nearshore velocity and sediment concentration vectors and their temporal dependencies upon the forcing function (local wave field);

3) relate the local velocity and sediment concentration structure to the bottom roughness and investigate the flow regimes;

4) evaluate appropriate friction factors for transport models; and

5) test simple physically based models for sediment transport and provide a first approximation total beach response model.

509. GREENWOOD, B., SHERMAN, D.J., Univ. Toronto (Geography, Geology), Univ. Southern California:
Nearshore hydrodynamics, 1980-88; Ph.D. thesis (Sherman).

See:

Bedform controls on longshore current velocity; Proc. 1st Internat. Conf. on Geomorphology, John Wiley and Sons ltd., Chichester, 1987.

Longshore current profiles and lateral mixing across the surf zone of a barred nearshore; Coastal Engineering, vol. 19, p. 149-168, 1986.

Determination of wave angle in shallow water; J. Waterway, Port, Coastal and Ocean Engineering, vol. 112, p. 129-139, 1986.

510. JOSENHANS, H.W., Geol. Surv. Can.:
Surficial geology, geomorphology and glaciology of the Labrador Shelf, 1981-.

See:

The Quaternary geology of the Labrador Shelf; Can. J. Earth Sci., vol. 23, no. 8, p. 1190-1213, 1986.

511. KOBLUK, D.R., Univ. Toronto (Geology):
Coral reef mapping and population dynamics, Bonaire, Netherlands Antilles, 1978-.

See:

Reef-dwelling molluscs in open framework cavities, Bonaire, N.A., and their potential for preservation in a fossil reef; Bull. Marine Science, vol. 39, p. 657-672, 1986.

512. KOBLUK, D.R., Univ. Toronto (Geology):
Intertidal cryptic reef communities, southwest Fiji Islands, South Pacific, 1982-.

Examination of corals, molluscs, bryozoans living in tide-influenced sub-rubble communities in a reef flat.

513. LEWIS, C.F.M., Geol. Surv. Can.:
Ice scouring of Continental Shelves, 1979-.

See:

Iceberg scouring rate studies, Grand Banks of Newfoundland; Geol. Surv. Can., Paper 87-1A, p. 825-833, 1987.

514. LOGAN, A., Univ. New Brunswick, Saint John (Geology):
Ecology and behaviour of the recent solitary corals **Scolymia cubensis** and **S. lacera** from Bermuda and the West Indies, 1986.

515. MACLEAN, B., Geol. Surv. Can.:
Eastern Baffin Island shelf bedrock and surficial geology mapping program, 1976-.

See:

Bedrock and surficial geology of Cumberland Sound, N.W.T.; Geol. Surv. Can., Paper 86-1B, p. 606-615, 1986.

A reconnaissance study of the bedrock and surficial geology of Hudson Strait, N.W.T.; ibid., p. 617-635, 1986.

Study of iceberg scours across the continental shelf and slope off southeast Baffin Island using the Sea MARC 1 midrange sidescan sonar; Geol. Surv. Can., Paper 87-1A, p. 847-857, 1987.

516. MORAN, K., Geol. Surv. Can.:
Marine geotechnical studies of the Canadian Eastern and Arctic Continental shelves and slopes, 1985-.

517. MUCCI, A., McGill Univ. (Geological Sciences):
The solubility behavior of carbonate minerals in oxic and suboxic marine environments, 1985-.

See:

Growth kinetics and composition of magnesian calcite overgrowths precipitated from seawater: quantitative influence of orthophosphate ions; Geochim. Cosmochim. Acta, vol. 50, p. 2255-2265, 1986.

Auger spectroscopy analysis of magnesian calcite overgrowths precipitated from seawater and solutions of similar composition; Amer. J. Sci., vol. 285, p. 289-305, 1986.

The incorporation of Mn(II) in magnesian calcites is being investigated as a function of the precipitation rate in seawater. The influence of Mn(II) on the solubility behavior of calcite in seawater is also being investigated.

518. MUCCI, A., PAGÉ, P., McGill Univ. (Geological Sciences), Univ. Québec à Montréal (Sciences de la Terre):
Géochimie des eaux et des sédiments dans les bassins marginaux, 1986-.

See:

The water chemistry of cruise 85-036 Bras d'Or Lake, Cape Breton Island, Nova Scotia; Geol. Surv. Can., Paper 87-1A, p. 17-24, 1987.

519. MUCCI, A., ZHONG SHAOJUN, McGill Univ. (Geological Sciences):
Kinetic constraints on the precipitation of calcite and aragonite from seawater: influence of temperature and salinity, 1986-.

To identify the environmental factors determining the mineralogy and composition of calcium carbonate minerals precipitated from seawater. Results should provide geologists and geochemists with a model capable of predicting the mineralogy of calcium carbonate precipitates as a function of saturation state, temperature and salinity of the parent solution.

520. PARROTT, R., Geol. Surv. Can.:
Engineering geology of the Atlantic Shelf, 1983-.

See:

Iceberg scouring rate studies, Grand Banks of Newfoundand; Geol. Surv. Can., Paper 87-1A, p. 825-833, 1987.

521. PIPER, D.J.W., Geol. Surv. Can.:
Quaternary geologic processes on continental slopes, 1981-.

522. PIPER, D.J.W., Geol. Surv. Can.:
Facies models of modern turbidites, 1983-.

523. SCHAFER, C.T., Geol. Surv. Can.:
Temporal and spatial variation of deep ocean currents in the western Labrador Sea, 1983-.

524. TAYLOR, R.B., Geol. Surv. Can.:
Coastal environments and processes in the Canadian Arctic Archipelago, 1982-.

COAL GEOLOGY/ GÉOLOGIE DU CHARBON

525. BUSTIN, R.M., Univ. British Columbia (Geological Sciences): Geology of coal mine sites southeastern Canadian Cordillera, 1979-.

Geological factors affecting the mineability and quality of coal are being investigated.

526. CAMERON, A.R., Geol. Surv. Can.: Petrographic examination of coking coals from the Kootenay Group, Alberta and British Columbia, 1961-.

527. CAMERON, A.R., Geol. Surv. Can.: Relationship of reflectance to chemical rank parameters of western Canadian coals, 1979-.

528. CAMERON, A.R., Geol. Surv. Can.: Regional coal rank variations in the Kootenay Formation and their relationship to the structural history of the southern Canadian Rocky Mountains, British Columbia-Alberta, 1981-.

529. CAMERON, A.R., Geol. Surv. Can.: Petrographic analyses of coals in the Saunders Group, Outer Foothills Belt, Alberta, 1983-.

530. CAMERON, A.R., Geol. Surv. Can.: Coal-Paleozoic, Mesozoic and Tertiary, western District of Mackenzie and northern Yukon Territory, 1985-.

See:

Rank and other compositional data on coals and carbonaceous shale of the Kayak Formation, northern Yukon Territory; Geol. Surv. Can., Paper 86-1B, p. 665-670, 1986.

531. DAWSON, F.M., Geol. Surv. Can.: Resource evaluation and geology of coal deposits of western Canada, 1976-.

532. GOODARZI, F., Geol. Surv. Can.: Mineral matter and trace element content of Canadian coals, Alberta, 1978-.

See:

Petrology of a burning bituminous coal seam at Coalspur, Alberta; Geol. Surv. Can., Paper 86-1B, p. 421-427, 1986.

Comparison of morphology and reflectance of macerals from a tectonically thickened coal seam from *Mist Mountain, British* Columbia; ibid., p. 671-678, 1986.

Amorphous kerogen: bituminite in the Second White Speckled Shale, southern Saskatchewan; Geol. Surv. Can., Paper 87-1B, p. 349-352, 1987.

The relationship between dendographs and Pearson product – moment correlation coefficients; ibid., p. 353-356, 1987.

533. HACQUEBARD, P.A., Geol. Surv. Can.: Rank and petrographic studies of coal and organic matter dispersed in sediments, 1968-.

534. HUGHES, J.D., Geol. Surv. Can.: Resource evaluation and geology of Canada's coal deposits, 1981-.

See:

A computer-based system for quantifying surface-mineable coal resources according to environmental characteristics and ownership of the overlying land surface; Geol. Surv. Can., Paper 86-1B, p. 507-518, 1986.

535. JERZYKIEWICZ, T., Geol. Surv. Can: Sedimentological studies of coal-bearing Upper Cretaceous and Paleocene formations, Alberta Foothills and Plains, 1981-.

See:

Petrology of a bituminous coal seam at Coalspur, Alberta; Geol. Surv. Can., Paper 86-1B, p. 421-427, 1986.

Caliche and associated impoverished palynological assemblages: an innovative line of paleoclimatic research into the uppermost Cretaceous and Paleocene of southern Alberta; ibid., p. 653-663, 1986.

The Cretaceous-Tertiary boundary in the central Alberta Foothills. I: Stratigraphy; Can. J. Earth Sci., vol. 23, no. 9, p. 1356-1374, 1986.

536. KALKREUTH, W.D., Geol. Surv. Can.: Optical properties of coals and dispersed organic materials, 1975-.

537. KALKREUTH, W.D., Geol. Surv. Can.: Regional coalification studies in the Minnes, Bullhead and Fort St. John groups, northeastern British Columiba, 1981-.

538. KALKREUTH, W.D., Geol. Surv. Can.: Conversion properties of selected coals and oil shales in relation to geological age, geological setting and petrographic composition, 1986-.

539. LANGENBERG, C.W., MACDONALD, D.E., MCCABE, P.J., STROBL, R.S., Alberta Research Council (Geol. Surv.): Coal quality in the Foothills and Mountains, Alberta local study, 1986-89.

To make a detailed study of coal quality variations in a structurally deformed coal-bearing sequence in order to establish baselines for (a) procedures to assess coal quality, and (b) comparison of coal quality data from different areas of mountains and foothills.

540. MACDONALD, D.E., RICHARDSON, R.J.H., LANGENBERG, C.W., MCCABE, P.J., Alberta Research Council (Geol. Surv.): Coal quality in the Foothills and Mountains, Alberta regional study, 1986-89.

To develop a geological understanding of coal quality in the Alberta foothills and mountains region by delineating, on a stratigraphic and geographic basis, the range of values for major components of coal through a synthesis of available data.

541. RICHARDSON, R.J.H., CHIDAMBARAM, N., KRZANOWSKI, R., MCCABE, P.J., Alberta Research Council (Geol. Surv.): Alberta coal geology database, 1986-89.

To design and maintain a database for use in other Alberta Research Council Coal Geology projects. To consolidate and integrate data produced by the Coal Geology Group since 1983 in the database. To transfer information from the database to other Alberta Government departments.

542. RICKETTS, B.D., Geol. Surv. Can.: Stratigraphic and coal resource analyses of coal bearing basins of Arctic Canada, 1985-.

See:

New formations in the Eureka Sound Group, Canadian Arctic Islands; Geol. Surv. Can., Paper 86-1B, p. 363-374, 1986.

The Eureka Sound Group of eastern Axel Heiberg Island: new data on the Eurekan Orogeny; ibid., p. 405-410, 1986.

Preliminary structural cross-section across Fosheim Peninsula and Axel Heiberg Island, Arctic Archipelago; Geol. Surv. Can., Paper 87-1A, p. 369-374, 1987.

543. SMITH, G.G., Geol. Surv. Can.: Resource evaluation and geology of coal deposits of western and northern Canada, 1983-.

544. STROBL, R.S., MACDONALD, D.E., MCCABE, P.J., WONG, R.K., Alberta Research Council (Geol. Surv.): Quality of the Plains coals, Alberta, 1986-89.

To quantify the degree of variability in coal quality for the Drumheller (Horseshoe Canyon Formation) and Ardley (Paskapoo Formation) coal zones. To develop an understanding of the factors controlling the quality of these coals. To use the knowledge gained to build predictive models of coal quality variations.

545. VAN DER FLIER-KELLER, E., Univ. Victoria (Geography): Geochemistry and mineralogy of some Lower Cretaceous coals.

546. WRIGHTSON, C.B., Geol. Surv. Can.: Resource evaluation and geology of coal deposits of western Canada, 1986-.

547. ZODROW, E.L., Univ. College of Cape Breton (Geology): Trace elements and major elemental constituents in Upper Carboniferous coal, Sydney Coalfield, Nova Scotia, 1985-.

Basically, the stratigraphical distribution of bulk geochemistry in coal seams is investigated and conclusions are drawn relating to the origins of the observed geochemical trends (which involves the polygenetic history of pyrite as well). A special study of sulfur origin is in progress involving explanation and interpretation.

INDUSTRIAL MINERALS/ SUBSTANCES MINÉRALES INDUSTRIELLES

548. BRAZEAU, A., PARÉ, C., Ministère de l'Énergie et des Ressources du Québec: Inventaire de granulats de la région de Sherbrooke, Québec, 1986-87.

Inventaire des ressources en granulats d'un région située à l'est de Sherbrooke, comprenant les feuillets topographiques 1:50 000 21E/4, 21E/5 et 21E/6. Evaluation qualitative et quantitative des dépôts.

549. BUTEAU, P., Ministère de l'Énergie et des Ressources du Québec: Inventaire des tourbières de Tête-à-la-Baleine, 1986-87.

Inventaire des dépôts de tourbe situés dans la région cotière comprise entre Tête-à-la-Baleine, et Harrington Hudson sur la Côte Nord. Définition des groupements végétaux et de la stratification des dépôts; évaluation qualitative et quantitative de la tourbe.

550. CHRISTIE, R.L., Geol. Surv. Can.: Geology of bedded phosphate deposits in Canada, 1976-.

551. DI PRISCO, G., Ontario Geol. Surv.: Precambrian-Paleozoic unconformity surface, 1986-88.

See:

The Paleozoic-Precambrian unconformity and associated mineralization in the Madoc area (eastern Ontario); Ontario Geol. Surv., Misc. Paper 132, 1986.

Investigation of the mineralogical potential of the Precambrian-Paleozoic unconformity in the central metasedimentary belt of the Grenville Province. Future exploration works will involve studies of the contact between Precambrian carbonates and the basal Paleozoic series.

552. FORD, M.J., SPRINGER, J.S., Ontario Geol. Surv.: Phosphate resources of Northern Ontario, 1986-88.

See:

Industrial minerals of the Cargill Township and Martison Lake Carbonatite Complexes; Ontario Geol. Surv., Misc. Paper 132, 1986.

Igneous apatite for soil additives: development of an agricultural technology using Northern Ontario materials; ibid., 1986.

To document the mineralogy and chemistry of residual phosphate deposits that have developed through intense weathering of carbonatite intrusions.

553. GUNTER, R., YAMADA, P., Manitoba Energy and Mines (Geol. Services): Industrial minerals investigations Flin Flon-Snow Lake region, Manitoba, 1984-89.

See:

Evaluation of industrial mineral occurrences in the Flin Flon-Snow Lake area; Manitoba Energy and Mines, Rept. Field Activities, p. 86-91, 1986.

Descriptions of deposits and an evaluation of their potential will improve definition of the industrial mineral potential of the Flon Flon-Snow Lake area.

554. GUNTER, R., YAMADA, P., Manitoba Energy and Mines (Geol. Services): Industrial minerals evaluation Lynn Lake-Thompson region, Manitoba, 1984-89.

See:

Evaluation of industrial mineral occurrences in the Thompson area; Manitoba Energy and Mines, Rept. Field Activities, p. 172-177, 1986.

Descriptions of deposits and an evaluation of their potential in the Lynn Lake-Thompson area.

555 HAYNES, S.J., Brock Univ. (Geological Sciences): Gypsum deposits of southern Ontario, 1986-.

556. HÉBERT, Y., JACOB, H.-L., Ministère de l'Énergie et des Ressources du Québec: Inventaire des minéraux industriels de la region de Wakefield, Québec, 1986-87.

Inventaire systématique des gîtes et indices de minéraux industriels de la région de Wakefield. Compilation des données, étude, échantillonnage et évalution des gîtes sélectionnés.

557. HORA, Z.D., BUTRENCHUK, S., British Columbia Ministry Energy, Mines, Petrol. Res.:
Evaluation of phosphate resource potential in British Columbia, 1986-88.

Systematic field evaluation of the Jurassic phosphate beds in northeastern part of the province, evaluation of Paleozoic phosphates in the northeastern Rocky Mountains and asessment of igneous apatite in British Columbia.

558. HORA, Z.D., MAYNARD, D.E., British Columbia Ministry Energy, Mines, Petrol. Res.:
Peat resources inventory in British Columbia, 1987-88.

A compilation study to identify the locations and the quality of peat deposits as potential sources of horticultural peat in British Columbia.

559. HORA, Z.D., PELL, J., British Columbia Ministry Energy, Mines, Petrol. Res.:
Preliminary assessment of kyanite and industrial garnets in British Columbia, 1987-88.

Compilation of data to identify zones with high number of kyanite and garnet occurrences in schists of Kaza group and similar units. Outlining of exploration targets for garnet abrasives and kyanite group minerals.

560. HORA, Z.D., PELL, J., IJEWLIW, O., MADER, U., British Columbia Ministry Energy, Mines, Petrol. Res., Univ. British Columbia (Geological Sciences):
Economic potential of carbonatite and kimberlite-hosted deposits in British Columbia, 1984-88; M.Sc. thesis (Ijewliw), Ph.D. thesis (Mader).

A systematic study of the geological environment, controls, petrology, mineralogy, geochemistry and distribution of carbonatites and kimberlite-related diatreemes in British Columbia, assessment of mineral potential.

561. HORA, Z.D., READ, P., British Columbia Ministry Energy, Mines, Petrol. Res.:
Evaluation of the industrial minerals potential of British Columbia Tertiary Basins, 1986-90.

Identification of favourable areas within Tertiary Basins for deposits of kaolin, ceramic clays, bentonite, zeolites, pozzolanic materials, diatomite, germanium etc. Assessment of industrial minerals potential of this largely unexplored geological unit.

562. HORA, Z.D., RYBACK-HARDY, V., British Columbia Ministry Energy, Mines, Petrol. Res.:
Assessment of magnetite resource in British Columbia, 1987-88.

Compilation of data on the distribution and potential size of magnetite resource for use as a heavy media in coal processing.

563. HORA, Z.D., RYBACK-HARDY, V., British Columbia Ministry Energy, Mines, Petrol. Res.:
Assessment of talc potential in British Columbia, 1987-88.

An inventory on talc deposits and environments, past producers and assessment of development potential for British Columbia – a compilation study.

564. HORA, Z.D., WHITE, G., British Columbia Ministry Energy, Mines, Petrol. Res.:
Assessment of feldspar resource in British Columbia, 1987-89.

Identification of potential British Columbia industrial sources of feldspar for the glass and ceramic industries in Western Canada.

565. HOWSE, A.F., Newfoundland Dept. Mines and Energy:
Assessment of Newfoundland marble deposits, 1985-88.

See:

Marble assessment – Insular Newfoundland; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

To assess the economic potential of Newfoundland's marble resource. After an initial island-wide survey (1985) attention focussed (1986) on white high purity marble deposits in the Canada Bay – Roddickton area. Work carried out includes detailed mapping, surface sampling and diamond drilling.

566. JOHNSON, M.D., WOLF, R.R., BEZYS, R.K., MAZUR, V.A., ARMSTRONG, D.K., Ontario Geol. Surv.:
Limestone industry of Ontario, 1986-87.

See:

Limestone industry study of Ontario; Ontario Geol. Surv., Misc. Paper 132, 1986.

567. JONES, G.J., GAUVREAU, M.E., SZOKE, S., Ontario Geol. Surv.:
Aggregate resources inventory of the Haliburton, Parry Sound, Muskoka and Fort Frances areas, Ontario, 1986-89.

To delineate and evaluate the aggregate resources in the Haliburton, Parry Sound, Muskoka and Fort Frances areas. This information is required as only limited resources of aggregate are presently known to exist in these areas.

568. JONES, G.J., SZOKE, S., Ontario Geol. Surv.:
Aggregate resources inventory west of Sudbury, Regional Municipality of Sudbury and District of Sudbury, Ontario, 1985-87.

See:

Aggregate resources inventory; Ontario Geol. Surv., Paper 140, 1987.

To investigate the quality and quantity of aggregate within 20 townships west of Sudbury. Special emphasis was placed on determining alkali-reactivity of the aggregate as chemical reactions have led to the deterioration of certain concrete structures built with local aggregates.

569. KIRBY, F.T., Newfoundland Dept. Mines and Energy:
Detailed aggregate resource assessments in Newfoundland and Labrador, 1982-.

To identify areas within municipal or other planning areas which contain high quality aggregate deposits, and to protect these valuable non-renewable resources from conflicting land uses, so they are available to meet the present and future aggregate needs of an area.

570. LANGFORD, F.F., RENAUT, R.W., BOYS, C., UTHA-AROON, C., Univ. Saskatchewan (Geological Sciences):

Studies of the geology of the Devonian potash deposits of Saskatchewan, 1985-; M.Sc. theses (Boys, Utha-Aroon).

Detailed studies of the mineralogy, sedimentology and geochemistry of the potash members of the Prairie Evaporite. Special emphasis is being given to the interpretation of anomalies within the potash beds.

571. MEYER, J.R., DEAN, P.L., Newfoundland Dept. Mines and Energy:
Industrial minerals in western Labrador, 1984-87.

See:

Silica in western Labrador; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

"Silica and dolomitic marble resources: Opportunities for strengthening the mining industry in western Labrador" abstract and paper given at 1986 CIM Annual Meeting in Montreal.

572. MEYER, J.R., DEAN, P.L., Newfoundland Dept. Mines and Energy:
Dimension stone in Labrador, 1986-.

See:

Dimension stone potential of the Nain anorthosite; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

573. PETRYK, A.A., Ministère de l'Énergie et des Ressources du Québec:
Inventaire des dolomies du Sud du Québec, 1986-87.

Étude, échantillonnage et analyse chimique des Formations de Morgan Corners, Milton, Rock River et Dunham (partie sud-ouest des Appalaches du sud-ouest du Québec). Evaluation du potentiel en dolomie industrielle de ces formations.

574. RENAUT, R.W., OWEN, R.B., Univ. Saskatchewan (Geological Sciences), Univ. Malawi (Geography and Earth Sciences):
Phosphate potential of Lake Malawi sediments, 1987-89.

A study of the sedimentology and geochemistry of non-marine sedimentary phosphates (especially vivianite) in rift valley environments.

575. SIMANDL, G., JACOB, H-L., Ministère de l'Énergie et des Ressources du Québec:
Inventaire des gîtes de wollastonite du Grenville, Québec, 1986-88.

Cartographie détaillée de gîtes et indices de wollastonite ainsi que de zones à haut potentiel en wollastonite, caractérisation et évaluation du potentiel économique des principaux gîtes. Les travaux de l'été ont porté sur les gîtes de la région de Saint-Sauveur, Lac Ste-Marie et Lost River, au nord-ouest de Montréal.

576. SIMANDL, G., VALIQUETTE, G., École Polytechnique (Génie minéral):
Caractérisations des gîtes de graphite de la vallée de la Gatineau, Québec, 1984-88; thèse de doctorat (Simandl).

L'étude vise à caractériser les gîtes de graphite de la vallée de la Gatineau selon des critères structuraux pétrologiques et géochimiques. Définir la genèse des différents types de gîtes et établir des guides d'exploration pour la découverte de nouveaux gîtes. Plusieurs nouveaux gîtes ont été découverts à la suite de ces travaux.

577. SIMPSON, M.A., Saskatchewan Research Council (Sedimentary Res.):
Aggregate resources potential (southern Saskatchewan).

Maps: 20, 1:250,000 scale maps covering all of Saskatchewan south of 54°N Lat. show potential of locating deposits of sand and gravel in various surficial terrain units.

578. SPRINGER, J.S., FORD, M.J., DI PRISCO, G., Ontario Geol. Surv.:
Mesozoic ceramic clays of northeastern Ontario, 1986-88.

See:

Pottery clays in Northern Ontario; Ontario Geol. Surv., Misc. Paper 132, 1986.

Focuses on the ceramic properties, mineralogy, and chemistry of Jurassic and Cretaceous. Where possible, additional studies of stratigraphy and sedimentology will be carried out to supplement the work which has been done over the years on Ontario's Mesozoic sediments.

579. STAFF AGGREGATE ASSESSMENT OFFICE, Ontario Geol. Surv.
Aggregate resources inventory of southern Ontario, 1976-.

See:

Aggregate resources inventory of: Zorra, Scugog, Hullett and Elma Townships, and the City of Port Colborne and Town of Fort Erie; Ontario Geol. Surv., Paper 61, 95, 108, 110, 117, 1986.

To provide aggregate resources information in those municipalities designated under the Pits and Quarries Control Act, 1971. This information is required to include potential mineral aggregate resource areas in planning strategies and official plans.

580. VOS, M.A., DI PRISCO, G., Ontario Geol. Surv.:
Feldspathic igneous rocks as potential ceramic raw material, 1984-.

See:

Granite and anorthosite as ceramic raw materials; Ontario Geol. Surv., Misc. Paper 132, 1986.

MINERAL DEPOSITION EXPLORATION/EVALUATION/ RECHERCHE ET ÉVALUATION DES GÎTES MINÉRAUX

581. ANDREW, K.P.E., GODWIN, C.I., Univ. British Columbia (Geological Sciences):
Geology and genesis of the Wolf epithermal precious metal prospect, central British Columbia; M.Sc. thesis (Andrew).

See:

The Wolf epithermal precious metal prospect, central British Columbia; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1986-1, p. 317-320, 1986.

To map in detail and interprete previously poorly understood stratigraphy in Ootsa Lake Group rocks; and to document and understand geology and genesis of the deposit.

582. ANDREW, K.P.E., GODWIN, C.I., Univ. British Columbia (Gelogical Sciences):
Geology and genesis of the Capoose precious and base metal prospect, central British Columbia.

See:

The Capoose precious and base metal prospect, central British Columbia; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 53-57, 1987.

To understand origin of garnet rhyolites on the property, study and timing of mineralization, genesis of the deposit, and compare with other deposits in the area.

583. ANDREWS, A.J., HUGON, H., CORFU, F., Ontario Geol. Surv.:
Alteration, metamorphism and structure associated with Archean gold deposits, Red Lake, Ontario, 1983-87.

See:

The anatomy of a gold-bearing greenstone belt: Red Lake, Northwestern Ontario, Canada; Proc. Gold '86', Toronto, p. 3-22, 1986.

Gold deposits of the Red Lake District; Gold '86' Excursion Guidebook, Toronto, p. 167-211, 1986.

584. BACHINSKI, D.J., KETTLES, K., Univ. New Brunswick (Geology): Mafic volcanic associated Fe-Cu-Zn sulfide mineralization in the 'ophiolitic' Fournier Group, northern New Brunswick, 1984-; M.Sc. thesis (Kettles).

585. BALDWIN, D.W., Manitoba Energy and Mines (Geol. Services): Mineral deposit studies – Lynn Lake area, Manitoba, 1984-89

See:

Mineral deposit studies in the Lynn Lake area; Manitoba Energy and Mines, Rept. Field Activities, p. 7, 1986.

Geological investigations in the Sheila Lake-Margaret Lake area; ibid., p. 8-12, 1986.

Geological investigations in the Foster Lake-Wasekwan Lake, ibid., p. 13-17, 1986.

Gold mineralization associated with the Agassiz Metallotect and the Honson Shear Zone, Lynn Lake greenstone belt, Manitoba; in Gold in the Western Shield, CIM Sp. Vol., p. 361-378, 1986.

Geological report, mineral deposit file and mineral deposit maps will be released as a contribution to the Federal-Provincial (Manitoba) Mineral Development Agreement.

586. BEAUDOIN, A., PERRAULT, G., HUBERT, C., École Polytechnique (Génie minéral): Pétrographie, géochimie et structure du gîte Callahan, district de Val d'Or, Québec, 1986-88; thèse de doctorat (Beaudoin).

Ce projet a pour objets: 1) La définition de la géologie structurale du gîte Callahan; et 2) la définition pétrographique et géochimique de la roche primaire et de l'altération associée à la minéralisation auifère. Les études structurales sont avancées.

587. BELL, R.T., Geol. Surv. Can.: Geology of uranium resources of Canada, 1975-.

See:

Pb-Pb isochron age of uraniferous phosphorite at the base of the Menihek Formation, Labrador Trough; Geol. Surv. Can., Paper 86-1B, p. 585-596, 1986.

588. BONNEAU, R.M., ROCHELEAU, M., VERPAELST, V., Université Laval (Géologie), UQAT: Étude metallogénique de la Formation de Hunter Mine, région de Rouyn, Abitibi, Québec, 1986-88; thèse de M.Sc. (Bonneau).

589. BOUCHARD, G., GUHA, J., CHOWN, E.H., ARCHAMBAULT, G., CARIGNAN, J., Université du Québec à Chicoutimi (Sciences de la terre): Environnement géologique du gisement aurifère de Gwillim, Chibougamau, Québec, 1984-87; M.Sc.A. (Bouchard).

590. BOURGAULT, G., PERRAULT, G., École Polytechnique (Génie minéral): Étude de la carbonatisation et de la minéralisation aurifère – indice Swanson, Barraute, Québec, 1985-87; M.Sc.A. (Bourgault).

Voir:

Distribution de l'or dans la syénite de l'indice minéralisé Swanson, Barraute, Québec; Réunion annuelle GAC-MAC, Programme et resumes, vol. 11, 1986.

G.B. a inventé un nouveau modèle inspiré de celui de Gresens (1967) pour analyser le métasomatisme associé à une intrusion falsique dans des roches volcaniques mafiques et ultramafiques. Fin des travaux prévue pour mai 1987.

591. BRISTOL, C.C., FROESE, E., Brandon Univ. (Geology), Geol. Surv. Can.: The Osborne Lake orebody: effects of high grade metamorphism on alteration associated with massive sulphide volcanogenic mineralization, 1984-.

592. BROPHY, J.A., FYSON, W.K., Indian Affairs and Northern Development (NAP) Canada, Univ. Ottawa (Geology): Gold vein studies, Yellowknife Basin, NWT, 1987-.

Detailed mapping of gold quartz veins in the Burwash Formation.

593. BROUILLETTE, P., CHEVÉ, S., BÉLANGER, M., INRS-Géoressources, Ministère de l'Énergie et des Ressources du Québec: Métallogénie de la région des lacs Minowean, du Portage et Otelnuc, Fosse du Labrador, Québec, 1985-87.

Voir:

Géologie du nord-est du lac Minowean, Fosse du Labrador; Ministère de l'Énergie et des Ressources du Québec, DP 87-09, 1987.

Une compréhension des contextes lithostratigraphique, structural et sédimentologique des minéralisations uranifères de la région; une connaissance de leurs minéralogies.

594. BURTON, D.M., PHILPOTT, G., New Brunswick Dept. Nat. Res. Energy (Geol. Surv. Br.): Geology, geochemistry of the Lower Devonian volcanic rocks of the Jacquet River area, New Brunswick, 1986-87.

See:

Geology, geochemistry and economic potential of Lower Devonian volcanic rocks along the Jacquet River Fault, northern New Brunswick; New Brunswick Dept. Nat. Res. Energy, Inf. circular 86-2, p. 5, 1986.

Aimed primarily at identifying hydrothermal systems in Lower Devonian felsic and mafic volcanic rocks and their potential for gold deposit.

595. CHAMPAGNE, P., GUHA, J., CHOWN, E.H., CARIGNAN, J., Université du Québec à Chicoutimi (Sciences de la terre): Géochimie des patrons d'altérations de l'indice aurifère du sud du Lac à l'eau Jaune, Chibougamau, Québec, 1985-88; M.Sc.A. (Champagne).

596. CHARTRAND, F., BROWN, A.C., École Polytechnique (Génie minéral): Diagenetic evolution of host sediments for the Redstone River (Coates Lake) stratiform copper deposit, Northwest Territories, 1986; Ph.D. thesis (Chartrand).

See:

Diagenesis, sulfides and metal zoning in the Redstone copper deposit, Northwest Territories; GAC-MAC, Program with Abstracts, vol. 11, p. 55, 1986.

Diagenetic features at White Pine (Michigan), Redstone (Northwest Territories, Canada) and Kamoto (Zaire): Sequence of mineralization in sediment-hosted copper deposits (Part 1); Geology and Metallogeny of Copper Deposits, p. 390-397, 1986.

597. CHEVÉ, S., BÉLANGER, M., INRS-Géoressources, Ministére de l'Énergie et des Ressources du Québec:
Métallogénie du secteur central de la Fosse du Labrador, Québec, 1982-87.

Voir:

Le complexe carbonatitique du lac Castignan, Fosse du Labrador; Ministére de l'Énergie et des Ressources du Québec, DP 87-10, 1987.

Une compréhension des métallotectes dans la partie centrale de la Fosse du Labrador; leur importance régionale; typologie des indices et gîtes.

598. CHURCH, B.N., British Columbia Ministry Energy, Mines, Petrol. Res.:
Geology and mineral resources of Tertiary outliers in British Columbia, 1980-.

See:

The Bubble Hotspring deposit, Black Dome area; British Columbia Ministry Energy, Mines, Petrol. Res., Paper 1987-1, p. 39, 1987.

Although the general geological setting of the Bubble Hotspring deposit is similar to the Blackdome mine a few kilometres to the west (that is, Eocene hornblende andesite and rhyolite country rocks), the obsidian immediately underlying the Bubble deposit is probable Miocene age and contemporaneous with the Black Dome basalt and the Porcupine Creek obsidian. Thermal and aqueous discharge from the cooling obsidian is the suspected origin of this yellowstone siliceous sinter deposit.

599. CHURCH, B.N., MACLEAN, M.E., British Columbia Ministry Energy, Mines, Petrol. Res.:
Geology and mineralization of the Bridge River mining camp, British Columbia, 1986.

600. DARLING, R., École Polytechnique (Génie minéral):
Geology of the Dumont gold deposit, Belmoral Mines Ltd., Val d'Or, Québec, 1986-.

601. DARLING, R., VU, L., DUSSAULT, C., WAITZENEGGER, B., École Polytechnique (Génie minéral):
Geology of the Ferderber gold deposit, Belmoral Mines Ltd., Val d'Or, Québec, 1983-86; M.Sc.A. theses (Vu, Dussault, Waitzenegger).

See:

New gold target in Quebec: Geology of the Ferderber gold deposit, Val d'Or; Can. Mining J., p. 25-29, 1986.

602. DILABIO, R.N.W., Geol. Surv. Can.:
Drift prospecting methods and models, 1978-.

See:

Surficial geology and till geochemistry, Lynn Lake – Leaf Rapids region, Manitoba; Geol. Surv. Can., Paper 86-1B, p. 245-256, 1986.

Mineral exploration in glaciated terrain using till geochemistry; Episodes, vol. 10, no. 1, p. 32-34, 1987.

603. DONALDSON, J.A., MICHEL, F.A., WATKINSON, D.H., WILSON, B.S., Carleton Univ. (Geology):
Sedimentary rocks and stratabound mineralization in the Cobalt region, 1938-; M.Sc. thesis (Wilson).

Wilson has been examining the mineralization within Huronian sediments in the Cobalt camp.

604. DUBÉ, B., GUHA, J., FRANKLIN, J.M., Université du Québec à Chicoutimi (Sciences de la terre):
Étude métallogénique aurifère du filon-couche de Bourbeau Région de Chibougamau, Quebec, 1985-; thèse de doctorat (Dubé).

Voir:

Étude métallogénique du filon-couche de Bourbeau, Region de Chibougamau; Ministére de l'Énergie et des Ressources du Québec, MB 86-04, 1986.

Étude métallogénique du filon-couche de Bourbeau: Etude régionale et gitologie de la mine Cooke; ibid., MB 86-09, 1986.

605. DUNSMORE, H.E., Geol. Surv. Can.:
Geology of uranium resources of Canada, 1976-.

606. FUSTÓS, A., EMR (CANMET):
Quantitative analyses of the yttrium distributions in the Denison Main Reef, Elliot Lake, Ontario, Canada, 1987-; Ph.D. thesis.

607. FYON, J.A., O'DONNELL, L., Ontario Geol. Surv.:
Geological controls on gold mineralization in the Confederation Lake (Uchi greenstone belt) area, Ontario, 1985-87.

See:

Regional strain state and alteration patterns related to gold mineralization in the Uchi-Confederation-Woman Lakes area; Ontario Geol. Surv., Misc. Paper 132, 1986.

608. GALE, G.H., Manitoba Energy and Mines (Geol. Services):
Mineral deposit studies in the Flin Flon Area, Manitoba, 1984-.

To provide detailed geological and geochemical data on specific gold and base metal deposits for utilization in exploration.

609. GANDHI, S.S., Geol. Surv. Can.:
Geology of uranium resources of Canada, 1977-.

See:

Uranium, gold and selenide minerals locally concentrated in drift at 'Twin Lakes' near Bathurst Inlet, N.W.T.; Geol. Surv. Can., Paper 86-1B, p. 47-56, 1986.

Garnetiferous gneisses and a quartz syenite intrusive sheet at Lynx Lake, Northwest Territories; ibid., p. 853-857, 1986.

610. GAREAU, M., SINCLAIR, A.J., Univ. BritishColumbia (Geological Sciences):
Mineralogy and lithogeochemistry of the Golden Sunlight deposit, Montana, 1985-88; M.Sc. thesis (Gareau).

611. GAUDREAU, R., ROCHELEAU, M., PERRIER, B., ST-JULIEN, P., HÉBERT, R., LACOSTE, P., Université Laval (Géologie):
Metallogenie de quelques gites aurifères dans les secteurs, Louvicourt, Vanquelin, Pershing, Abitibi, Québec, 1985-88.

Gitologie et métallogénie des gites de Sigma II, Chimo, Bruell-Aurora, Croiner Brosnor et Nordeau. Définition des contrôles stratigraphiques, structuraux et géochimiques et définition de la genèse des gisements.

612. GAUDREAU, R., ROCHELEAU, M., ST-JULIEN, P., Université Laval (Géologie): Métallogénie de l'or associé au pluton de Mooshla, canton de Bousquet, Abitibi, Québec, 1983-86; thèse de M.Sc. (Gaudreau).

La mise en place de la minéralisation aurifère est reliée à la fracturation d'une intrusion dioritique et granodioritique représentant une chambre magmatique précoce différenciée. Ces roches intrusives sont consanguines aux volcanites de la partie supérieure du Blake River.

613. GAUTHIER, M., Université du Québec à Montréal (Géologie): Gîtologie des Appalaches de l'Estrie, Quebec, 1983-87.

Description des gîtes de l'Estrie, classification des gîtes de l'Estrie, et modification des fiches de gîte.

614. GAUTHIER, N., ROCHELEAU, M., ST-JULIEN, P., GUHA, J., Université Laval (Géologie), UQAC: Géologie structurale et métallogénie aurifère de la zone tectonique de Cadillac dans la région de Rouyn, Abitibi, Québec, 1984-88; thèse de doctorat (Gauthier).

Voir:

Métallogénie des gîtes miniers New Rouyn Murger et O'Neill Thompson — Région de Rouyn-Noranda; Ministère de l'Énergie et des Ressources du Québec, MB 85-60, 1986.

The Cadillac-Larder Lake Fault Zone, Rouyn-Beauchastel area, zone of ultramafic rocks and its relation to gold mineralization; GAC-MAC Annual Meeting, Program with Abstracts, vol. 12, p. 72, 1986.

Stratigraphie, géologie structurale et métallogénie des gîtes Augmitto, Astoria et Rouyn Merger-O'Neill Thompson dans la zone tectonique de Cadillac, cantons de Rouyn et de Beauchastel, région de Rouyn.

615. GEBERT, J., FOX, J., BÉLANGER, M., Univ. McGill (Geological Sciences), Ministère de l'Énergie et des Ressources du Québec: Métallogénie de Cu-Zn-Pb-Ag-Au de la partie sud de la Fosse du Labrador, Québec, 1985-87; thèse de maîtrise (Gibert).

Voir:

Métallogénie des indices de Cu-Zn-Pb-Ag-Au dans la région du lac Frédérickson, Fosse du Labrador; Ministère de l'Énergie et des Ressources du Québec, MB 86-20, 1986.

Connaissance des processus de concentration des minéralisations de Cu-Zn-Pb-Ag-Au; caractérisation des métallotectes régionaux; évaluer le potentiel en métaux précieux du secteur.

616. GILBERT, M., DARLING, R., HUBERT, C., École Polytechnique (Génie minéral), Université de Montréal (Géologie): Géologie du groupe volcanique archéen de Blake River dans la région du lac Pelletier, ceinture de l'Abitibi, Québec, 1984-; M.Sc.A. (Gilbert).

617. GIOVENAZZO, D., GUHA, J., BARNES, S.J., FRANCIS, D., Université du Québec à Chicoutimi (Sciences de la terre): Étude des mécanismes de concentration et de déposition des éléments du groupe des Planténoïdes, EGP, dans l'Ungava, Nouveau-Québec, 1986-; thèse de doctorat (Giovenazzo).

See:

La Fosse de l'Ungava: une province métallogénique enrichie en éléments du groupe de Platine; Ministère de l'Énergie et des Ressources du Québec, DV-86-16, p. 75-81, 1986.

618. GIOVENAZZO, D., LAMOTHE, D., IREM-MERI, Université du Québec à Chicoutimi (Sciences de la Terre), Ministère de l'Énergie et des Ressources du Québec: Synthèse métallogénique de la Fosse de l'Ungava, Québec, 1985-89.

Voir:

Indices minéralisés du secteur central de la Fosse de l'Ungava; région du lac Bélanger, des lacs Nuvilik et du lac Cécilia; Ministère de l'Énergie et des Ressources du Québec, ET 87-09, 1987.

Le travail vise une compréhension des métallotectes dans la Fosse de l'Ungava (ceinture de Cap-Smith) et en particulier une connaissance approfondie du comportement des éléments platinoïdes. Ce travail fait partie d'un projet de reconnaissance géologique à long terme qui a dwbuté en 1983.

619. GIRARD, R., WOUSSEN, G., BÉLANGER, M., Université du Québec à Chicoutimi (Sciences de la Terre), Ministère de l'Énergie et des Ressources du Québec: Lithostratigraphie et métallogénie des séquences métavolcaniques et roches associées de la rivière Déat, Nouveau-Québec, 1985-87; thèse de Maîtrise (Girard).

Une compréhension du contexte lithostratigraphique et des métallotectes de la région de la rivière Déat.

620. GODWIN, C.I., ARCHAMBAULT, M., Univ. British Columbia (Geological Sciences): Geology and origin of the Silver Creek carbonate hosted Pb-Ag-Sn Manto Deposit, Midway area, northernmost central British Columbia, 1983-86; M.Sc. thesis (Archambault).
Manto: mineralography and SEM-EDS determinations.

621. GODWIN, C.I., GORZYNSKI, G., Univ. British Columbia (Geological Sciences): Lithogeochemistry of the Pb-Zn-Barite Sedex Cirque deposit, north-central British Columbia, 1982-86; M.Sc. thesis (Gorzynski).

Completed thesis; Lithogeochemistry; stratigraphy; genesis.

622. GODWIN, C.I., GREENWOOD, H.J., HOLBEK, P., Univ. British Columbia (Geological Sciences): Metamorphogenic gold, Stikine area, northwestern British Columbia, 1982-87; M.Sc. thesis (Holbek).

Basic mapping at <1:50,000; metamorphic petrology; genesis of gold.

623. GODWIN, C.I., JURAS, S., Univ. British Columbia (Geological Sciences): Geology of Price Hillside, Buttle Lake volcanogenic camp, central Vancouver Island, southwestern British Columbia, 1982-87; Ph.D. thesis (Juras).

Local stratigraphy; petrogenesis; Rb-Sr zircon geochronometry; structural geology; tectonic provinences; arc-rift-backarc; high MGO basalt; volcanogenic ore deposits.

624. GODWIN, C.I., MCCOLL, M., Univ. British Columbia (Geological Sciences): Geology of Britannia Ridge — Furry Creek areas, Britannia Pendant, southwestern British Columbia, 1983-87; M.Sc. theses (McColl).

Geochronometry by K-Ar, Rb-Sr; volcanic petrology.

625. GODWIN, C.I., MCDONALD, B., Univ. British Columbia (Geological Sciences):
Geology of epithermal gold mineralization in the Cirque at Mount Skukum, south-central Yukon, 1983-87; M.Sc. thesis (McDonald).

Oxygen isotopes; fluid inclusions; detail volcanic stratigraphy, mapping and petrology; K-Ar dating.

626. GROSS, G.A., Geol. Surv. Can.:
Geology and appraisal of metalliferous sedimentary iron and manganese resources, 1957-.

627. GUHA, J., ARCHAMBAULT, G., CHOWN, E.H., Université du Québec à Chicoutimi (Sciences de la terre):
Modélisation de l'évolution et de la mise en place des fluides minéralisateurs associés aux gîtes filoniens archéens, 1984-.

See:

Hydrothermal systems and correlations for mineral deposits in the Chibougamau mining district – an overview; CIM Sp. vol. 34, p. 517-534, 1986.

628. GUHA, J., COUTURE, J-F., Université du Québec à Chicoutimi (Sciences de la terre):
Synthèse régionale du sillon de roches vertes archéennes de la rivière Eastmain supérieure, Québec, 1986; thèse de doctorat (Couture).

629. HAYNES, S.J., Brock Univ. (Geological Sciences):
Greywacke-hosted gold deposits, 1982-.

See:

Greywacke-hosted gold deposits of the non-volcanic association; Northwest Mining Assoc., Publ. 11, 1987.

Turbidite-hosted gold deposits; Geol. Assoc. Can., Spec. Paper 32, 1986.

Classification of quartz veins in turbidite-hosted gold deposits, greenschist facies, eastern Nova Scotia; CIM Bull. vol. 80, no. 898, p. 37-51, 1987.

630. HUTCHISON, W., GODWIN, C.I., SWEETKIND, D., Colorado School of Mines,Univ. British Columiba (Geological Sciences):
Geology and plumbology of Kcotenay Arc lead-zinc deposits south-central British Columbia, 1987-90; Ph.D. thesis (Sweetkind).

Geology of deposits; galena lead isotopes; stable isotopes; fluid inclusions; geochemical studies; mapping base to detail deposits.

631. JEFFERSON, C.W., Geol. Surv. Can.:
Regional mineral resource assessment, northern Canada, 1984-.

See:

Structure and stratigraphy of the Paleozoic-Precambrian contact zone on White and Southampton Island, District of Keewatin; Geol. Surv. Can., Paper 87-1A, p. 451-455, 1987.

632. KIRKHAM, R.V., Geol. Surv. Can.:
Geology of copper and molybdenum deposits in Canada, 1970-.

633. KLASSEN, R.A., Geol. Surv. Can.:
Uranium drift prospecting techniques; Lower Kazan River area, District of Keewatin, 1975-.

634. LACROIX, S., DARLING, R., École Polytechnique (Génie minéral):
La gîtologie et la genèse du Cu-Ni dans la région du lac Aulneau, Fosse du Labrador, Québec, 1983-; M.Sc.A. (Lacroix).

635. LACROIX, R., PERRAULT, G., École Polytechnique (Génie minéral):
Gîtologie de la mine New Pascalis, Québec, 1983-86; M.Sc.A. (Lacroix).

Voir:

Géologie et géochimie de la propriété New Pascalis, Val d'Or, NW, Quebec; Rénunion annuelle GAC-MAC, Programme et resumes, vol. 11, 1986.

La région de New Pascalis est remarquable par sa grande abondance d'or (15-8 ppb Au de teneur normale), ses hautes teneurs en eau (moyenne de 3.91%) et en CO_2 (moyenne à 5.31%). Il y a là tous les éléments pour définir une région source potentielle pour l'or.

636. LAO KHEANG, PERRAULT, G., École Polytechnique (Génie minéral):
Les inclusions fluides de la minéralisation aurifère de la mine Sigma-2 et du granophyre encaissant, 1984-87.

Le fluide du quartz aurifère de Sigma-2 est aqueux avec environ 10% CO_2 et salin (11% pds éq. NaCl) et contient un peu de Ba. Le fluide du quartz du granophyre est strictement aqueux, salin (25%) et contient du Ba. Le fluide métamorphique est aqueux et carbonique. Il est probable que le fluide minéralisateur est un mélange des deux autres.

637. LAO KHEANG, PERRAULT, G., École Polytechnique (Génie minéral):
Études des inclusions fluides des gîtes d'or archéens de la région de Val d'Or, Noranda, Québec, 1985-

See:

Metamorphic fluid of New Pascalis gold deposit, Val d'Or, NW Quebec; GAC-MAC Annual Meeting, Program with abstracts, vol. 11, 1986.

Cl-rich and S-rich fluids related to the Archean gold deposits in the Val d'Or region, NW. Quebec; GAC-MAC, réunion annuelle, Programme et resumes, vol. 12, p. 61, 1987.

Ce projet se continue. Les études récentes ou en cours ont porté sur les gîtes d'or Sigma-2, New Pascalis, Doyon, Camflo, Swanson, Callahan.

638. LAUZIÈRE, K., GUHA, J., CHOWN, E.H., ARCHAMBAULT, G., Université du Québec à Chicoutimi (Sciences de la terre):
Interprétation du mode de mise en place de la minéralisation aurifère, Mine Bachelor, Desmaraisville, Québec, 1984-87; M.Sc.A. (Lauzière).

639. LEBEL, J., PERRAULT, G., SAUVE, P., École Polytechnique (Génie minéral):
Étude pétrographique et géochimique de la mine d'or Akasaba, district de Val d'Or, Québec, 1985-87; M.Sc.A. (Lebel).

Cette thèse sera bientôt déposée. Elle a mis en relief une minéralisation stratiforme, cinq paragenèses métalliques différentes, des altérations haute température des épontes (sic, grenat, diopside, amphibolite).

640. LYDON, J.W., Geol. Surv. Can.:
Geology of lead and zinc resources of Canada, 1977-.

641. MACDONALD, A.J., Ontario Geol. Surv.:
The geology of Archean Lode gold deposits, 1982-.

See:

Gold mineralization in Ontario 1: The role of banded iron formation; CIMM Sp. Vol. 34, Chibougamau – Stratigraphy and Mineralization, 1986.

The economic geology of Archean Lode gold deposits, with particular emphasis upon host rock lithology, hydrothermal alteration, deformation, metamorphism and associated felsic intrusions.

642. MACDONALD, A.J., Ontario Geol. Surv.:
The geology of Platinum mineralization, 1985-.

643. MACKENZIE, B.W., DOGGETT, M.D., Queen's Univ. (Geological Sciences):
Canadian gold mining trends: an historical perspective, 1984-87; M.Sc. thesis (Doggett).

Provides an empirical analysis of those parameters most closely related to Canadian gold supply. These include production variables such as ore reserves, rate of ore mined, the average grade of ore mined, the mill recovery factor, gold production, and gold mine employment. Other parameters examined are operating cost per tonne of ore mined and per ounce of gold produced, government cost assistance and investment in equipment repair, new mine development and expansion, and gold exploration. Mine-specific information, augmented by aggregate industry-wide data, are analyzed to discern historical trends. These time trends are explained in terms of theoretical concepts of gold supply, worldwide market conditions, and econmic and geologic forces within the Canadian gold mining sector.

644. MACKENZIE, B.W., ROBERTSON, N.S., Queen's Univ. (Geological Sciences):
Effects of changes in inflation and exchange rates on Canada's competitive position in international mineral markets, 1986-; M.Sc. thesis (Robertson).

645. MALCZAK, J., Ontario Geol. Surv.:
Mineral deposit studies in the Black River – Matheson area, District of Cochrane, Ontario, 1984-87.

See:

Report on the St. Andrew Goldfields deposit, the Clavos Gold deposit and the Montclerc Prospect, District of Cochrane; Ontario Geol. Surv., Misc. Paper 132, 1986.

Studies of specific gold deposits will contribute to a report on the gold metallogenesis of the BRIM area. A brief evaluation of the potential for specific industrial minerals for the area was completed.

646. MCALLISTER, A.L., BACHINSKI, D.J., OLSEN, P.E., Univ. New Brunswick (Geology):
The nature, distribution and depositional control of gold mineralization at Brunswick No. 12 mine, Bathurst, New Brunswick, 1985-88; Ph.D. thesis (Olsen).

647. MELLINGER, M., Saskatchewan Research Council (Data Analysis Group):
Geochemistry applied to uranium metallogenesis, 1979-86.

See:

Geochemical signatures of uranium deposition in the Athabasca Basin of Saskatchewan (Canada); Uranium, vol. 3, no. 214, 1987.

To use geochemistry as a help to understanding the metallogenesis of unconformity-type uranium deposits in Saskatchewan.

648. MELLINGER, M., SMITH, J.W.J., Saskatchewan Research Council (Data Analysis Group):
Geochemistry applied to gold metallogenesis, 1984-.

See:

Lithogeochemistry related to gold in Saskatchewan; In: Gold in the Western Shield, L.A. Clark ed., CIM Sp. Vol. 38, p. 253-271, 1986.

To use geochemistry as a help to understanding the metallogenesis of gold deposits in Saskatchewan.

649. METHOT, Y., PERRAULT, G., TRUDEL, P., École Polytechnique (Génie minéral):
Gîtologie de la mine Eldrich, Québec, 1986-87; M.Sc.A. (Methot).

La thèse sera bientôt déposée. Elle a montré que la dispersion de l'or autour des veines se fait par le biais de fractures et veinules (structure favorable).

650. MICHEL, S.G., BROWN, A.C., École Polytechnique (Génie minéral):
Nature of the gold showings at Mont-Organisé (Haiti) (Sectors Maman Noël and Grenier), M.Sc.A. thesis (Michel).

651. MILLER, R., Newfoundland Dept. Mines and Energy:
Strange Lake – Letitia Lake project, Newfoundland, 1984-88.

To document the geology, petrology and mineralogy of: 1) the Strange Lake Zr-Y-Nb-REE deposit and related granites, 2) the Mann #1 (Letitia Lake) Nb-Be showing and related peralkaline rocks. Both of the study areas are located in Labrador).

652. NIMPAGARITSE, G., PERRAULT, G., POULIOT, G., École Polytechnique (Génie minéral):
Le gite de vanadium de Mukanda, Burundi, Afrique, 1984-86; M.Sc.A. (Nimpagaritse).

L'anorthosite contient un plagiocluse très riche en CaO (A_n55-65). Les hyrosènes du gabbronorite sont riches en fer (Fs/En de 55/39 dans la pigeonite et l'hypersthène et de 32/31 dans l'angite). Les meilleures cibles pour le vanadium semblent être les lits sub-massifs d'ilméno-magnétite.

653. PADGHAM, W.A., GAULT, C.D., Indian Affairs and Northern Development (NAP) Canada:
Gold deposit zoning, Slave Structural Province, NWT, 1986-.

See:

Gold deposit zoning, Slave Structural Province, parts of NTS 75, 76, 85, 86, NWT; DIAND, EGS 1986-3.

654. PANTELEYEV, A., BLOODGOOD, M.A., British Columbia Ministry Energy, Mines, Petrol. Res.:
Quesnel mineral belt – geological mapping and mineral potential study, 1986-88.

See:

Quesnel gold belt-alkalic volcanic terrane between Horsefly and Quesnel Lakes (93A/6); British Columbia Ministry of Energy, Mines, Petrol. Res., Paper 1987-1, p. 125-134, 1987.

Geology of the Triassic black phyllite in the Eureka Peak area, central British Columbia (93A/7); ibid., p. 135-142, 1987.

A provincial-federal mineral development agreement (MDA) project to investigate regional and local environments of gold and copper-gold mineralization in Triassic/Jurassic island arc volcanic and flanking sedimentary rocks of Quesnel Terrane.

655. PERRAULT, G., TRUDEL, P., VERREAULT, C., École Polytechnique (Génie minéral):
Minéralogie et géochimie du gîte Golden Pond East, district de Casa Berardi, Abitibi, Québec, 1986-88; M.Sc.A. (Verreault).

656. PILOTE, P., GUHA, J., Université du Québec à Chicoutimi (Sciences de la terre):
Aspects structuraux et stratigraphiques des minéralisations aurifères des dépôts de Golden Pond, canton de Casa Berardi, 1986-89; thèse de doctorat (Pilote).

657. PIROSHCO, D., Ontario Geol. Surv.:
Gold mineralization potential in the North Caribou Lake greenstone belt, Ontario, 1987; M.Sc. thesis.

See:

Structural geology and gold mineralization of the Eyapamikama Lake area of the North Caribou Lake greenstone belt, District of Kenora (Patricia Portion); Ontario Geol. Surv., Misc. Paper 132, p. 379-385, 1986.

658. POULSEN, K.H., Geol. Surv. Can.:
Metallogeny of gold in the continental crust, 1985-.

659. QUIRT, D., MELLINGER, M., Saskatchewan Research Council (Mineral Res.):
Athabasca unconformity-type uranium deposits along the northern rim of the basin, 1986-88.

Involves petrological and lithogeochemical studies on a number of uranium deposits and prospects along the northern rim of the Athabasca basin. The general character of these deposits is somewhat different than the more extensively studied eastern rim deposits with respect to basement lithostructural setting as well as to the form of the uranium mineralization.

660. QUIRT, D., REES, M., Saskatchewan Research Council, Univ. Saskatchewan (Geological Sciences):
Goldfields area: gold and the 'Mine Granites', 1984-; M.Sc. thesis (Rees).

An assessment of the metasomatic character of the 'mine granites' is being carried out using petrology, XRD mineralogy and lithogeochemistry. Gold mineralization is intimately related to this metasomatic process. To date, all of the 'mine granites' (Frontier, Box, Athona) are interpreted as being metasomatic in origin, however there are substantial differences between them due to differences in host rock.

661. ROSCOE, S.M., Geol. Surv. Can.:
Metallogeny of the northwestern part of the Canadian Shield, 1977-.

See:

Uranium, gold and selenide minerals locally concentrated in drift at 'Twin Lakes' near Bathurst Inlet, N.W.T.; Geol. Surv. Can., Paper 86-1B, p. 47-56, 1986.

Outliers of porphyritic alkaline volcanic rocks of the Christopher Island Formation at Snowbird Lake, N.W.T.; ibid., p. 679-683, 1986.

662. ROSS, J.V., GODWIN, C.I., REDDY, D., Univ. British Columbia (Geological Sciences):
Geology of upper Indian River area, including volcanogenic deposits, southwestern British Columbia, 1986-88; M.Sc. thesis (Reddy).

Detailed mapping from vicinity of Maggie mine to Sky Pilot Mountain.

663. RUZICKA, V., Geol. Surv. Can.:
Geology of uranium and thorium resources of Canada, 1975-.

See:

Uranium investigations in Canada, 1986; Geol. Surv. Can., Paper 87-1A, p. 249-262, 1987.

664. SANGSTER, D.F., Geol. Surv. Can.:
Geology of lead and zinc resources in Canada, 1965-.

665. SAVOIE, A., PERRAULT, G., BÉLAND, J., École Polytechnique (Génie minéral):
Gîtologie de la mine Doyon, Quebec, 1983-87; thèse de doctorat (Savoie).

See:

Geological setting of the Doyon gold deposits, Bousquet Township, Abitibi, Quebec, Canada; In Gold 1986, Internat. Symp. The Geology of Gold Deposits, p. 97-107, 1986.

Le nouveau gîte no 3 de la mine Doyon est constitué de veines de quartz-pyrite-carbonate et de veines de quartz-pyrite-chalcopyrite-carbonate dans la granodiorite leucocratique du complexe de Mooshla; ces veines sont de direction NNO et de pendage quasi vertical.

666. SCHROETER, T., DROWN, T., CRAWFORD, S., British Columbia Ministry Energy, Mines, Petrol. Res.:
Documentation of mineral discoveries in British Columbia: 1965 to 1986, 1986-87.

667. SCHROETER, T., PANTELEYEV, A., British Columbia Ministry Energy, Mines, Petrol. Res.:
Gold in British Columbia, 1979-88.

See:

Gold in British Columbia; British Columbia Ministry Energy, Mines and Petrol. Res., Prel. Map No. 64, 1986.

Brief studies of selected gold deposits in southern British Columbia; ibid., Paper 1987-1.

Fieldwork to be completed in 1987; first draft mid-1988.

668. SCHROETER, T., PANTELEYEV, A., DIAKOW, L.J., British Columbia Ministry Energy, Mines, Petrol. Res.:
Toodoggone map area, British Columbia, 1980-88.

See:

Toodoggone map area; British Columbia Ministry of Energy, Mines, Petrol. Res., Paper 1987-1.

669. SCOATES, R.F.J., Geol. Surv. Can.:
Regional mineral resource assessment, northern Canada, 1984-.

670. SINCLAIR, A.J., WHITING, B.H., Univ. British Columbia (Geological Sciences):
Petrology and lithogeochemistry, San Antonio gold mine, Bissett, Manitoba, 1984-87; M.Sc. thesis (Whiting).

Interpretation of genesis of the SAM unit which hosts ore. Metasomatic affects during mineralization.

671. SINCLAIR, W.D., Geol. Surv. Can.:
Geology of copper and molybdenum resources of Canada, 1977-.

See:

Porphyry tungsten-molybdenum orebodies, polymetallic veins and replacement bodies, and tin-bearing greisen zones in the Fire Tower Zone, Mount Pleasant, New Brunswick; Economic Geol., vol. 81, p. 1356-1373, 1986.

672. SKETCHLEY, D.A., SINCLAIR, A.J., Univ. British Columbia (Geological Sciences):
Alteration of basalt, Erickson mine, Cassiar district, northern British Columbia, 1983-87; M.Sc. thesis (Sketchley).

See:

Gains and losses of elements resulting from wallrock alteration — a quantitative basis for evaluating lithogeochemical samples; British Columbia Ministry Energy, Mines, and Petrol. Res., Paper 1987-1, p. 413-417, 1987.

Multielement lithogeochemistry of alteration associated with gold-quartz veins of the Erickson mine, Cassiar district; ibid., p. 57-63, 1987.

673. SKIPPEN, G., DIAMOND, L., MARSHALL, D., Carleton Univ. (Geology):
Hydrothermal mineral deposits.

See:

Vapour loss ("Boiling") as a mechanism for fluid evolution in metamorphic rocks; Contrib. Mineral. Petrol., vol. 94, p. 317-322, 1986.

Vein minerals and fluids and their relationship to wallrock alteration. Field research is in progress on gold veins in the Mine Centre area of northwestern Ontario and the Cobalt area, northeastern Ontario.

674. SMITH, D.G.W., MORTON, R.D., CHANGKAKOTI, A., Univ. Alberta (Geology):
Fluid inclusion studies of the Thor Lake rare metal deposit, N.W.T., 1986-88.

Fluid inclusions of the rare metal deposits, particularly those of the T-zone, are being investigated with the intention of throwing further light on the chemical and physical environment of formation.

675. SMITH, P.M., Ontario Geol. Surv.:
Metallogeny of gold in the Lake of the Woods greenstone belt: timing and controls on mineralization, 1985-87.

See:

Duport, a structurally controlled gold deposit in northwestern Ontario, Canada; Proc. Gold '86, Toronto, p. 197-212, 1986.

An examination of the interrelationship of gold mineralization to structure, stratigraphy, metamorphism, alteration, and plutonic activity.

676. TASSÉ, N., Université Laval (Géologie), INRS-Géoressources:
Gîtologie des Basses Terres du St-Laurent, Québec, 1982-87.

Description des gîtes des Basses-Terres, classification des gîtes des Basses-Terres, et modification des fiches de gîte.

667. THEYER, P., Manitoba Energy and Mines (Geol. Services):
Platinum group elements in southeastern Manitoba, 1982-.

To study the distribution and concentration of PGE in the Bird River Complex and other mafic-ultramafic occurrences in southeastern Manitoba.

678. THEYER, P., GABA, R., Manitoba Energy and Mines (Geol. Services):
Mineral occurrence studies Rice Lake greenstone belt, Manitoba, 1983-.;

To document and study mineral occurrences in the Rice Lake greenstone belt.

679. TREMBLAY, C., GUHA, J., BARNES, S.J., FRANCIS, D., Université du Québec à Chicoutimi (Sciences de la terre):
Étude de la répartition des platinoides dans les différentes intrusions mafiques de la Région du Lac Vaillant (Cape Smith), Québec, 1986-88; thèse de maîtrise (Tremblay).

680. TROOP, D.G., Ontario Geol. Surv.:
Mineralization and rock alteration controls at the Ross Mine, Holtyre, Ontario, 1985-88.

See:

Multiple orebody types and vein morphologies, Ross Mine, District of Cochrane; Ontario Geol. Surv., Misc. Paper 132, p. 413-420, 1986.

This project forms part of the metallogenetic study for gold mineralization in the Black River-Matheson area, with special emphasis on mineralogical and chemical mechanisms of alteration in host basaltic rocks.

681. TROTTIER, J., BROWN, A.C., GAUTHIER, M., École Polytechnique (Génie minéral), UQAM:
Metallogenic synthesis of sulphide deposits in the ophiolite belt of the SE Appalachians of Quebec, 1985-88; Ph.D. thesis (Trottier).

See:

The Huntingdon Mine: A "Cyprus-Type" deposit in the ophiolite belt of the Quebec Appalachians; Terra Cognita, vol. 6, no. 3, p. 550, 1987.

The ophiolite belt contains a multitude of sulphide types (e.g. $C_1 \pm A_1$ at Huntingdon; Z_2-$C_2 \pm SG, A_2, A_3$ at Memphrémagog; $N_1 \pm Z_2$-C_3 at Eastern Metals). The project describes and interprets these in terms of evolving tectonic settings and lithostratigraphic units.

682. TRUDEL, P., École Polytechnique (Génie minéral):
Métallogénie de l'or au Québec, 1983-93.

Voir:

Géochimie de la biotite associée à certains gisements d'or de Val d'Or, Malartic et Chibougamau, Québec; Can. Mineral., vol. 24, p. 761-774, 1986.

Nous avons déjà réalisé en 1986 une synthèse des gisements d'or de Val d'Or; au cours des prochaines années, nos objectifs sont les suivants: 1987-1988: Malartic; 1988-1989: Cadillac; 1989-1991: Rouyn-Noranda; 1991-1992: Chibougamau; 1992-1993: Casa-Berardi et bande nord, etc.

683. WARES, R., FOX, J., BERGER, J., BÉLANGER, M., IREM-MERI, Ministère de l'Énergie et des Ressources du Québec:
Métallogénie de la partie nord de la Fosse du Labrador, Québec, 1986-89.

Voir:

Synthèse métallogénique des indices de sulfures au nord du 57ième parallèle, Fosse du Labrador; Ministère de l'Énergie et des Ressources du Québec, MB 87-19, 1987.

Connaissance de la métallogénie du nord de la Fosse du Labrador, y compris la typologie des indices et gîtes, et les métallotectes locaux et régionaux.

684. WHITTAKER, P.J., Ontario Geol. Surv.:
Gold metallogenesis in the Black River – Matheson area, District of Cochrane, Ontario, 1984-87.

See:

Gold metallogenesis along the Pipestone and Destor Porcupine deformation zones and associated structures; Ontario Geol. Surv., Misc. Paper 132, 1986.

Metallogenetic studies in the Black River-Matheson area, District of Cochrane; ibid., 1986.

685. WILTON, D.H.C., KERR, A., MACDOUGALL, C., MACKENZIE, L., NORTH, J., VASKOVIC, M., EVANS, D., Memorial Univ. (Earth Sciences):
Metallogeny of the central mineral belt, Labrador. Epithermal precious metal deposits; Ph.D. thesis (Kerr), M.Sc. theses (MacDougall, Mackenzie, North, Vaskovic, Evans).

See:

Two contrasting granophile and non-granophile metallogenic styles in the early Proterozoic Upper Aillik Group, Central Mineral Belt, Labrador; Mineralium Deposita, 1987.

Middle Proterozoic granite-related mineralization in the Round Pond area, Labrador; Geol. Surv. Can., Paper 87-1A, p. 457-466, 1987.

PETROLEUM EXPLORATION/ EVALUATION/RECHERCHE ET ÉVALUATION DES GÎTES DE PÉTROLE

686. BARCLAY, J.E., Geol. Surv. Can.:
Western Canada Basin petroleum resources assessment, 1985-.

687. BELL, J.S., Geol. Surv. Can.:
Maturation studies, 1981-.

688. BELL, J.S., Geol. Surv. Can.:
Evolution of East Coast Paleozoic basins, 1984-.

689. BUSTIN, R.M., LINK, C., Univ. British Columbia (Geological Sciences):
An investigation of sedimentary Rock Maturation Profile in northern Yukon and Northwest Territories, 1985-87; M.Sc. thesis (Link).

690. DIETRICH, J.R., Geol. Surv. Can.:
Petroleum geology of Tertiary, Mesozoic and Paleozoic north of 68° on the N.W.T. and Yukon mainland and offshore, 1986-.

691. EMBRY, A.F., Geol. Surv. Can.:
Mesozoic Basin analysis of Sverdrup Basin, Arctic Archipelago, 1985-.

692. GOODARZI, F., Geol. Surv. Can.:
Maturity of dispersed organic materials in lower and middle Paleozoic rocks, determined by optical and geochemical studies, 1982-.

See:

Graptolite preparation for reflected light microscopy – a technical note; Geol. Surv. Can., Paper 87-1A, p. 317-322, 1987.

693. GOODARZI, F., Geol. Surv. Can.:
Organic maturation and properties of kerogen and bitumen in clastic and carbonate sequences in the Sverdrup Basin and Franklinian Geosyncline, District of Franklin, 1985-.

694. GRANT, A.C., Geol. Surv. Can.:
Geological interpretation of geophysical data as an aid to basin synthesis and hydrocarbon inventory, 1974-.

See:

Pisces IV research submersible finds oil on Baffin Shelf; Geol. Surv. Can., Paper 86-1A, p. 65-69, 1986.

Seismic stratigraphy and structure of the east Canadian continental margin between 41 and 52°N; Can. J. Earth Sci., vol. 22, no. 5, p. 686-703, 1985.

695. HAMBLIN, A.P., Geol. Surv. Can.:
Evaluation of hydrocarbon potential of Mackenzie Corridor, northern Mainland, 1985-.

696. HARRISON, R., MACGILLIVRAY, J., KRAMERS, J., ROTTENFUSSER, B., WIGHTMAN, D., BELL, D., KEITH, D., PRENTICE, M., Alberta Research Council (Geological Survey):
Oil sands geology research program: Resource characterization, reservoir geology, pilot site-studies, 1986-87.

An integrated evaluation and research effort focussed on the major oil sands deposits and the thermal recovery processes being evaluated as a means of resource development.

697. HIGGINS, A.C., Geol. Surv. Can.:
Thermal maturity studies of the Paleozoic of the northern mainland and Tertiary of the Beaufort Sea/Mackenzie Delta, 1985-.

698. KALKREUTH, W.D., Geol. Surv. Can.:
The relationship between kerogen (type and rank) and chemical extract data, for the purpose of source rock evaluation, 1977-.

699. KALKREUTH, W.D., Geol. Surv. Can.:
Organic petrology of Canadian oil shale deposits, 1986-.

700. KENT, D.M., CISYK, D., Univ. Regina (Geology):
Heavy oil potential – Mississippian and Devonian carbonate rocks – south Saskatchewan, 1986-88.

Preliminary report has been submitted outlining distribution of heavy oil occurrence. Detailed study of the Upper Devonian Birdbear Formation has commenced.

701. KENT, D.M., LINCOLN, D., Univ. Regina (Geology):
Microfacies and pore systems in the Jurassic Upper Shaunavon, Bone Creek Field, southwestern Saskatchewan, 1986-88.

702. KENT, D.M., PERRAS, G., Univ. Regina (Geology):
Geology and reservoir characteristics of crinoidal grainstone deposits – Mississippian rocks, southeastern Saskatchewan, 1986-88.

703. LANE, D.M., Saskatchewan Geol. Surv.:
Subsurface carbon dioxide in Saskatchewan, sources and potential use in enhanced oil recovery, 1985-.

704. LANE, D.M., Saskatchewan Geol. Surv.:
Dawson Bay Formation in southeastern Saskatchewan, 1986-87.

To map the Dawson Bay Formation in the previously unmapped portion of southeastern Saskatchewan and to promote petroleum exploration of deeper Palaeozoic sediments in SE. Saskatchewan. Major portion of data compiled (March 1987).

705. MACQUEEN, R.W., Geol. Surv. Can.:
Organic geochemical and maturation studies, Mainland N.W.T. and Yukon, 1985-.

706. MCALPINE, K.D., Geol. Surv. Can.:
Regional geology of the sedimentary basins of the continental margin of Newfoundland, Labrador and Baffin Bay, 1984-.

707. MCMILLAN, N.J., Geol. Surv. Can.:
Habitat of oil-basin classification hydrocarbon resources, 1985-.

708. NORFORD, B.S., Geol. Surv. Can.:
Thermal maturity studies of the Paleozoic sedimentary rocks, Arctic Islands, 1984-.

709. OSADETZ, K.G., Geol. Surv. Can.:
Petroleum resource evaluation of western Canada, 1978-.

See:

Speculation on the petroleum source rock potential of portions of the Lodgepole Formation (Mississippian) of southern Saskatchewan; Geol. Surv. Can., Paper 86-1B, p. 647-651, 1986.

Origin of compositional differences amongst oils from the Hummingbird Field (Paleozoic), southeast Saskatchewan; Geol. Surv. Can., Paper 87-1A, p. 331-336, 1987.

710. PODRUSKI, J.A., Geol. Surv. CAn.:
Petroleum geology, Sverdrup Basin, Franklinian Geosyncline and Arctic Interior Platform, District of Franklin, 1984-.

711. PODRUSKI, J.A., Geol. Surv. Can.:
Evaluation of the hydrocarbon potential of the Arctic Islands, 1985-.

712. PODRUSK, J.A., Geol. Surv. Can.:
Petroleum geology and tectonic history of the Sweetgrass Arch, Alberta and Saskatchewan, 1986-.

713. PROCTER, R.M., Geol. Surv. Can.:
Evaluation of Canadas petroleum potential, 1972-.

714. RISK, M.J., BEZYS, R.K., AITKEN, A., BOURGOIN, B., McMaster Univ. (Geology):
1) Sedimentology of the Long Rapids Formation, a possible oil shale in the James Bay Lowlands;

2) Arctic bivalves as environmental indicators, 1982-; M.Sc. thesis (Bezys), Ph.D. theses (Aitken, Bourgoin).

715. SIMPSON, F., KARANJA, S.W., NYAGAH, K.P., Univ. Windsor (Geology):
Basin analysis and hydrocarbon potential of East Kenya, 1986-89; M.Sc. theses (Karanja, Nyagah).

Basin analysis in onshore and offshore regions of eastern and southeastern Kenya involving integration of surface and subsurface data.

716. SKIBO, D.N., Geol. Surv. Can.:
Thermal history and basin evaluation – Canadian frontier regions, 1983-.

717. SNOWDON, L.R., Geol. Surv. Can.:
Oil/source correlation for Northern Interior Plains crudes, District of Mackenzie, 1985-.

718. STEPHENSON, R.A., Geol. Surv. Can.:
Geological modelling of thermal history and basin development, 1983-.

719. WARDLAW, N.C., MCKELLAR, M., MCAULEY, R., STEFFES, D., MCNAMARA, B., TANG KONG, W., Univ. Calgary (Geology and Geophysics):
Rock-pore properties and enhanced oil recovery, 1983-87; Ph.D. thesis (McAuley), M.Sc. theses (Steffes, McNamara, Tang Kong).

See:

Sensitivity of drainage and imbition to pore structures as revealed by computer simulation of displacement process; Advances in Colloid and Interface Science, vol. 26, p. 1-68, 1986.

The influence of wettability and critical pore-throat size ratio on snap-off; J. Colloid and Interface Sci., vol. 109, no. 2, 1986.

To study the way in which fluids are distributed in the pores of a reservoir rock; to study measurable rock properties that influence recovery processes.

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720. BIRKETT, T.C., Geol. Surv. CAn.:
Metallogeny of Eastern Canada, 1984-.

721. BUSTIN, R.M., Univ. British Columbia (Geological Sciences):
Diagenesis of lower Nanaimo Group along the lithoprobe transect, Vancouver Island, 1984-.

Organic and inorganic diagenesis are being investigated.

722. BUSTIN, R.M., ROSS, J.V., Univ. British Columbia (Geological Sciences):
Optical properties of organic matter (following deformation) and their utility as stress/strain indicators, 1985-.

Samples of organic matter are being deformed in a triaxial cell at various stresses, strain rate and temperature in order to document the behavior of organic matter during deformation.

723. DAWSON, K.M., Geol. Surv. Can.:
Metallogeny of the northern Canadian Cordillera, 1974-.

724. DUNSMORE, H.E., Geol. Surv. Can.:
Metallogenic processes in sedimentary-diagenetic environments, 1982-.

725. ECKSTRAND, O.R., Geol. Surv. Can.:
Metallogeny of ultramafic and mafic rocks, 1984-.

726. ERAMANOVICS, I.F., Geol. Surv. Can.:
Georesource studies of the Nain and Churchill Structural Provinces in North River (14E) and Nutak (14F) map-areas, Labrador (Newfoundland and Quebec), 1985-

727. FRANKLIN, J.M., Geol. Surv. Can.:
Metallogeny of the southwestern part of the Canadian Shield, 1975-.

See:

Geochemistry of scheelites associated with Archean gold deposits: implications for their direct age determination; Geol. Surv. Can., Paper 87-1A, p. 591-596, 1987.

Silver deposits associated with the Proterozoic rocks of the Thunder Bay District, Ontario; Can. J. Earth Sci., vol. 23, no. 10, p. 1576-1591, 1986.

728. FRANKLIN, J.M., Geol. Surv. Can.:
Metallogeny of marine enviornments, including active spreading ridges, 1982-.

729. GILBOY, C.F., VIGRASS, L.W., Saskatchewan Geol. Surv., Univ. Regina (Geological Sciences):
Economic minerals of Saskatchewan, 1986-87.

"Economic Minerals of Saskatchewan" is a 216-page book, published by the Saskatchewan Geological Scoiety, containing formally written accounts of 20 papers which were initially delivered to delegates attending a symposium of the same name held in Regina on 17 and 18 November 1986. The papers focus on those of the province's commodities which are recoverable mainly by mining or quarrying, but also include two useful regional overviews.

730. GROSS, G.A., Geol. Surv. Can.:
Geology of mineral resources in the oceans, 1976-.

731. MILLER, A.R., Geol. Surv. Can.:
Metallogeny of the Baker Lake – Thelon region, Northwest Territories, 1981-.

See:

Outliers of porphyritic alkaline volcanic rocks of the Christopher Island Formation at Snowbird Lake, N.W.T.; Geol. Surv. Can., Paper 86-1B, p. 679-683, 1986.

732. O'DRISCOLL, C.F., REUSCH, D.N., Newfoundland Dept. Mines and Energy:
Avalon metallogeny, Newfoundland, 1984-.

See:

Geological and metallogenic investigations in the western belt of the Love Cove Group (NTS 2D/1, 2, 8) Avalon Zone, Newfoundland; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

This is the third of a continuing metallogenic study of the Avalon Zone in Newfoundland. The southern portion of the western belt of the Love Cove Group was mapped at a 1:50,000 scale. The dominantly volcanic Love Cove Group and the Dover Fault are of special interest because of their potential for hosting gold deposits. Samples were collected from rocks in areas that contain mineral occurrences and alteration zones.

733. O'DRISCOLL, C.F., SMITH, J.L., STAPLETON, G.J., Newfoundland Dept. Mines and Energy:
Mineral Occurrence Data System, 1978-.

See:

Mineral occurrence map – Burgeo (110), 1:250,000; Newfoundland Dept. Mines and Energy, Map 86-33, 1986.

Mineral occurrence map – St. Alban's (1M/13), 1:50,000; ibid., Map 86-80, 1986.

The Mineral Occurrence Data System is designed to offer an efficient information service on all mineral occurrences in the Province. It is a two-part project comprising a manual Mineral Inventory File and a computerized Mineral Index. Mineral occurrence maps are plotted on updated geological bases and are published as NTS areas are completed.

734. POULSEN, K.H., Geol. Surv. Can.:
Comparative regional metallogeny, Ontario-Manitoba-Saskatchewan, 1984-.

735. ROBERT, F., Geol. Surv. Can.:
Metallogeny of Eastern Canada, Ontario and Québec, 1985-.

736. SAMSON, I.M., Univ. Windsor (Geology):
Fluid evolution and geochemistry of the Mount Pleasant W-Mo-Sn deposit, New Brunswick, 1985-87.

737. SAMSON, I.M., WILLIAMS-JONES, A.E., MARTIN, R., WOOD, S., BOURNE, J., Univ. Windsor (Geology), McGill Univ. (Geological Sciences), Univ. Quebec a Montreal (Sciences de la Terre):
Geology and geochemistry and origin of Li-Be Pegmatite + Mo-B, vein deposits, Preissac-Lacorne Batholith, Quebec, 1986-.

738. SANGSTER, A.L., Geol. Surv. Can.:
Metallogeny of Nova Scotia, 1986-.

See:

Geology in the vicinity of the Lime Hill zinc occurrence, southwestern Cape Breton Island, Nova Scotia; Geol. Surv. Can., Paper 87-1A, p. 555-561, 1987.

739. SANGSTER, D.F., Geol. Surv. Can.:
Geological research on sediment-hosted base metal deposits, 1986-.

740. SIMPSON., F., LAGOS, G., BACOPOULOS, J., Univ. Windsor (Geology):
Cross-formational flow of groundwater related to solution-generated collapse (SGC) structures, 1986-89; M.Sc. theses (Lagos, Bacopoulos).

Potentiometric cells for formation waters related to solution-generated collapse (SGC) structures associated with bedded evaporites in Western Canadian Sedimentary Basin, Michigan – Appalachian Basin region.

741. SOUTHER, J.G., Geol. Surv. Can.:
Geothermal energy resources in Canada, 1973-.

742. TUACH, J., Newfoundland Dept. Mines and Energy:
Metallogensis of granitoid rocks in Newfoundland, 1985-; Ph.D. theses.

See:

Variations in oxygen isotope ratios related to source terranes and to hydrothermal regimes in the Ackley Granite, Newfoundland; In Granite-Related Mineral Deposits, Extended Abstrcts, Instit. of Mining and Metallurgy, p. 285-289, 1986.

Metallogeny of Newfoundland granites – studies in the Western White Bay area and on the southwest coast; Newfoundland Dept. Mines and Energy, Rept. 86-1, 1987.

Gold mineralization of possible late Precambrian Age in the Jackson's Arm area (12H/15), White Bay, Newfoundland; ibid., 1987.

Rb-Sr and ^{40}Ar-^{39}Ar studies, and redefinition of the Ackley Granite, southeast Newfoundland; Geol. Assoc. Can., Newfoundland Branch, Ann. Spring Meeting St. John's, Program with Abstracts, p. 9, 1986.

Geochemical trends in the Ackley Granite, southeast Newfoundland: their relevance to magmatic-metallogenic processes in high-silica granitoid systems; Can. J. Earth Sci., vol. 23, p. 747-765, 1986.

Geophysical studies and emplacement of the Ackley Granite Suite, Newfoundland; GAC-MAC Ann. Meeting, Program with Abstracts, vol. 11, 1986.

Docking of Avalonia with North America – The significance of the Ackley Granite, Newfoundland, IUGS-UNESCO Project 233, Internat. Conf. Iberian Terranes and their regional correlation, Program with Abstracts, p. 77, 1986.

Gold-bearing environments in the Sops Arm – Jackson's Arm area, White Bay, Newfoundland: significance of the Doucer's Valley Fault System; Fifth District 1 Meeting, CIM, Program with Abstracts, p. 17, 1986.

Mineralized environments, metallogenesis, and the Doucer's Valley Fault System; ibid., 1986.

Tungsten – molybdenum in the Granite Lake – Meelpaeg Lake area; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

743. WATSON, G.P., Geol. Surv. Can.:
Metallogy of New Brunswick, 1986-.

744. YEO, G., Geol. Surv. Can.:
Stellarton Basin analysis, Nova Scotia, 1984-89.

745. **BAYLISS, P., ROBERTS, A., SABINA, A.**, Univ. Calgary (Geology and Geophysics):
Mineral X-ray Powder Data File, 1973-.

See:

Mineral Powder Diffraction File: vol. I, Data Book, vol. II. Search Manual; ICCD 1986.

746. **FERGUSON, R.B., BALL, N.A.**, Univ. Manitoba (Geological Sciences):
Quantitative mineralogical anlaysis of perthitic maximum microcline and low albite by X-ray powder diffractometry, 1983-87.

See:

Quantitative phase analysis of Rb-enriched maximum microcline and low albite by X-ray powder diffractometry; Can. Mineral, vol. 25, 1987.

747. **GAUMOND, A., PERRAULT, G., BÉLAND, J.**, École Polytechnique (Génie minéral):
Minéralogie de la minéralisation aurifère de la mine New Pascalis, près de Val d'Or, Quebec, 1985-86; M.Sc.A. (Gaumond).

La minéralisation aurifère se retrouve principalement dans des veines de tension de direction E-O et de pendage 40°S. La gangue non-métallique est de quartz, tourmaline, calcite et antarite, fuchsite, chlorite et séricite; les minéraux métalliques sont pyrite, chalcopyrite, pyrhotite, rutile-leuconène, chalcocine, digénite, or massif, tetradymite, tellurobismuthite et wehrlite, molybdénite, magnetite-ilménite, bismuth natif et galène.

748. **HARRIS, D.C.**, Geol. Surv. Can:
X-ray diffraction analyses and mineralogical studies, 1968-.

749. **HAWTHORNE, F.C.**, Univ. Manitoba (Geological Sciences):
Structural hierarchy in oxysalt minerals, 1977-.

See:

Structural hierarchy in Mx Ty Øz minerals; Can. Mineral., vol. 24, p.625-642, 1986.

The crystal chemistry of the benitoite-group minerals, and structural relationships in (Si_3O_9) compounds; Neues Jahr. Fur Mineral. Monat., vol. 1986, p. 16-30, 1986.

The bonding networks in oxysalt minerals are analyzed in terms of graph theoretic hierarchy and bond-valence theory. These hierarchies can be related to paragenetic sequence in natural environments.

750. **HAWTHORNE, F.C., EBY, R.K., GROAT, L.A.**, Univ. Manitoba (Geological Sciences):
Topological aspects of Cu-oxysalt structures, 1985-; M.Sc. thesis (Eby).

See:

Lammerite, a modulated close-packed structure; Amer. Mineral., vol. 71, p. 206-209, 1986.

The crystal structure and chemical composition of cumengeite; Mineral. Mag., vol. 50, p. 157-162, 1986.

A series of Cu-oxysalt minerals are being examined by crystal structure solution/refinement techniques. The goal is to characterize the effect of local Jahn-Teller distortion on the long-range topology of the bonding network in Cu-minerals.

751. **HAWTHORNE, F.C., ERCIT, L.S., GROAT, L.A.**, Univ. Manitoba (Geological Sciences):
Structure solution and systematics in anisodesmic minerals, 1984-.

See:

The crystal structure of bobfergusonite and its relation to the wylleite-alluandite minerals; Can. Mineral., vol. 24, p. 605-614, 1986.

The sturcutre of ungemachite, $K_3Na_8Fe^{3+}(SO_4)_6(NO_3)_2 \cdot 6H_2O$, a mixed sulphate-nitrate mineral; Amer. Mineral., vol. 71, p. 826-829, 1986.

To characterize the structures of minerals deemed to be of particular interest in more general studies of structure systematics of oxysalt minerals.

752. **HAWTHORNE, F.C., GROAT, L.A.**, Univ. Manitoba (Geological Sciences):
The crystal chemistry of vesuvianite, 1983-; Ph.D. thesis (Groat).

A detailed study of the optics, chemistry, structure and paragenesis of the complex but common silicate mineral vesuvianite. Microprobe and wet-chemical analyses and optical studies are nearly complete, detailed crystallographic and spectroscopic work is in progress.

753. **HAWTHORNE, F.C., GROAT, L.A., RAUDSEPP, M., EWING, R.**, Univ. Manitoba (Geological Sciences):
Aspects of metamictization in natural titanites, 1985-.

See:

Characterization of crystallinity/metamictization variations in natural titanites; Geol. Assoc. Can. – Mineral. Assoc. Can., Annual Meeting, Program with abstracts, vol. 11, 1986.

Crystallinity/metamictization variations in natural titanites; Amer. Crystallogr. Assoc. Meeting, Hamilton, 1986.

Natural titanites which show a range of metamictization/crystallinity are being characterized by normal powder X-ray diffraction and infrared spectroscopy, single-crystal structure refinement, Rietveld structure refinement, high resolution transmission electron microscopy, EXAFS and XANES.

754. **HAWTHORNE, F.C., LEROUX, M., HALDEN, N.M.**, Univ. Manitoba (Geological Sciences):
Mineralogy and geochemistry of the garnet-anthophyllite rocks, Star Lake, Manitoba, 1986-; M.Sc. thesis (Leroux).

755. **HAWTHORNE, F.C., RAUDSEPP, M., TURNOCK, A.C., OSBORNE, M.D.**, Univ. Manitoba (Geological Sciences):
Application of the Rietveld method to mineralogy and experimental petrology, 1983-.

Crystal structures and site-occupancies may be determined for very fine-grained samples from X-ray powder data using this technique. We are using this method to look at bulk composition and cation ordering in synthetic amphiboles, pyroxenes, olivines and spinels.

756. HAWTHORNE, F.C., SMITH, J.V., Univ. Manitoba (Geological Sciences): Aspects of three-dimensional nets, 1985-.

See:

Enumeration of 4-connected 3-dimensional nets-insertion of 2-connected vertices on to 3-connected plane nets; Zeit. Kristallographie, vol. 175, p. 15-31, 1986.

Enumeration of 4-connected 3-dimensional nets – body centred cubic nets based on the rhombicuboctahedron; Can. Mineral., vol. 24, p. 643-648, 1986.

A systematic topological analysis of 4-connected 3-dimensional nets is being carried out and applied to problems of structure prediction and classification in framework silicates, aluminosilicates and aluminophosphates.

757. MCCAMMON, C., Univ. British Columbia (Geological Sciences): Mössbauer spectroscopy of minerals at high pressure and low temperature, 1986-90.

This is a new method for studying phase transitions in iron-bearing minerals at high pressure. Equipment is currently being ordered and setup; operation of the facility is estimated by the end of 1987.

758. MCGREGOR, C.R., FERGUSON, R.B., Univ. Manitoba (Geological Sciences): Systematic twinning and phase characterization of perthitic microclines by single-crystal X-ray precession photography, 1981-87; M.Sc. thesis (McGregor).

759. MORTON, R.D., FOSTER, S., Univ. Alberta (Geology): Pine Point Mines, N.W.T.; M.Sc. thesis (Foster).

See:

Geology and mineralogy of N-81 orebody, Pine Point Mines; Poster session, DIAND Geoscience Forum, 1986.

760. MORTON, R.D., SMITH, D.G.W., PERSAUD, E., Univ. Alberta (Geology): Quantitative reflectance and computer-based mineral identification: their applications in the characterisation of the mineral phases in the Dawn Lake U-Ni deposit, North Saskatchewan, 1985-86; M.Sc. thesis (Persaud).

761. OMOUMI, H., SMITH, D.G.W., LEIBOVITZ, D.P., Univ. Alberta (Geology): GemIdent: a computer data base for gems and a Fortran 77 program for their identification, 1987-89; M.Sc. thesis (Omoumi).

To develop a modified version of the MinIdent database and mineral identification software which will permit the identification of gems including, where possible, determination of the natural or synthetic origin and, in the case of natural materials the probable source (locality). The use of rigorous mineralogical techniques, particularly compositional determination of major, minor and trace elements, will be stressed.

762. OTTAWAY, T.L., WICKS, F.J., Royal Ontario Mus. (Mineralogy and Geology), Univ. Toronto (Geology): Mineralogy and geochemistry of the Colombian Emerald deposits, 1981-87; M.Sc. thesis (Ottaway).

See:

Characteristics and origin of the Muzo emerald deposit, Colombia; Internat. Mineral. Assoc., Abstracts with Program, 14th General Meeting, Stanford, California, 1986.

763. PETERSON, R.C., JAMIESON, H., Queen's Univ. (Geological Sciences): Mg/Fe order as function of temperature in $(Mg\ Fe)Fe_2O_4$, 1985-.

Involves the development of a micro furnace capable of attaining temperatures up to 1300°C during the diffraction experiment.

764. PETERSON, R.C., LAGER, G.A., Queen's Univ. (Geological Sciences), Univ. Kentucky: Al/Mg ordering in $MgAl_2O_4$ determined at various temperatures by neutron diffraction, 1986.

Experiments will take place March 14-18/87 at Argonme National Labs., Chicago.

765. PETERSON, R.C., SNYDER, J., RODEE, C., Queen's Univ. (Geological Sciences): Cation ordering in rock forming minerals as a function of temperature, 1985-; M.Sc. theses (Snyden, Rodee).

$CoMgSiO_4$ and $NiMgSiO_4$ olivines are currently being investigated.

766. PINCKSTON, R., SMITH, D.G.W., Univ. Alberta (Geology): Economic mineralogy of the Lake-Zone deposits, Thor Lake, Northwest Territories, 1986-88; M.Sc. thesis (Pinckston).

To examine in detail the REE and Ta-Nb mineralogy of the Lake zone of the important rare metal deposits at Thor Lake, Northwest Territories, Canada. The investigation will be carried out largely on drill core material and will employ a combination of optical, electron microprobe and X-ray diffraction techniques.

767. PLANT, A.G., Geol. Surv. Can.: Electron beam microanalysis, 1962-.

768. QUIRT, D., Saskatchewan Research Council (Mineral Res.): PEI redbeds – clay mineralogy, 1985-87.

The mineralogy of the clay matrix of samples from various megacyclic sequences is being examined with respect to clay mineral species. Variations due to oxidation-reduction phenomena are being documented.

769. RAUDSEPP, M., HAWTHORNE, F.C., TURNOCK, A.C., Univ. Manitoba (Geological Sciences): Cation ordering in pyroxenes and amphiboles, 1984-88.

See:

Rietveld crystal structure refinement of synthetic C-centered Ca-Mg-Fe pyroxenes from powder diffraction data; GAC-MAC Annual Meeting, Program with abstracts, vol. 12, p. 81, 1987.

This analysis of synthetic pyroxenes of variable composition gives cation distribution and ordering, and its effect on crystal structure.

770. RAUDSEPP, M., HAWTHORNE, F.C., WICKS, F.J., GROAT, L.A., Univ. Manitoba (Geological Sciences): Infrared spectroscopy as a probe of local environment in minerals, 1985-.

See:

Crystallinity/metamictization variations in natural titanites; Inter. Mineral. Assoc. Congress, Stanford, 1986.

FTIR is being used to probe local conditions in minerals as a function of compositional change. Current work involves cation ordering in synthetic amphiboles, cation and anion ordering in amblygonites, hydrogen bonding in lizardites and crystallinity variations in titanites.

771. SMITH, D.G.W., Univ. Alberta (Geology):
The mineralogy and chemistry of the Innisfree brecciated LL5 chondrite, 1979-88.

772. SMITH, D.G.W., Univ. Alberta (Geology):
The mineralogy and mineral chemistry of the Skiff meteorite, 1980-.

The Skiff meteorite was found by W.L. Weneth on his farm near Skiff, Alberta. It is believed to be an H group chondrite but awaits full investigation and proper classification.

773. SMITH, D.G.W., DE ST. JORRE, L., Univ. Alberta (Geology):
Ga-induced cathodoluminescence in albite from the Thor Lake rare metal deposits, N.W.T., 1985-86; M.Sc. thesis (de St. Jorre).

774. SMITH, D.G.W., DE ST. JORRE, L., Univ. Alberta (Geology):
Mineralogical studies, Thor Lake, NWT.

Mineralogical studies of minerals of the Thor Lake rare mineral deposits.

775. SMITH, D.G.W., DE ST. JORRE, L., REED, S.J.B., LONG, J.V.P., Univ. Alberta (Geology), Cambridge Univ.:
Nature and origin of zonal metamictization of Zr-silicates from the Thor Lake rare metals deposits, Northwest Territories, 1985-86.

776. SMITH, D.G.W., LEIBOVITZ, D.P., Univ. Alberta (Geology):
MINIDENT; A data base for minerals and a FORTRAN 77 Program for their identification, 1981-.

See:

MinIdent: A data base for minerals and a computer program for their identification; Can. Mineral., vol. 24, p. 695-708, 1986.

777. SMITH, D.G.W., MUIRA, Y., LAUNSPACH, S., Univ. Alberta (Geology), Yamaguchi Univ. (Geology):
Compositional variation and origin of metal phases in chondritic meteorites, 1979-.

778. SMITH, D.G.W., NOREM, D., GOLD, C., Univ. Alberta (Geology):
Chemical mineralogy of clays, 1980-.

See:

The electron-microprobe analysis of Palygorskite; Can. Mineral., vol. 24, p. 499-511, 1986.

779. WICKS, F.J., Royal Ontario Mus. (Mineralogy and Geology), Univ. Toronto (Geology):
The structures and crystal chemistry of the serpentine minerals, 1970-.

See:

Lizardite and its parent enstatite: a study by X-ray diffraction and transmission electron microscopy; Can. Mineral., vol. 24, p. 775-788, 1986.

Distance least-squares modelling of the lizardite IT structure; Geol. Assoc. Can. – Mineral. Assoc. Can., Program with abstracts, vol. 11, p. 144, 1986.

The lack of well crystallized Mg-end member lizardite has lead to the use of structure modelling and Rietveld structure refinement to determine the details of this structure. High resolution transmission electron microscopy is being used to learn more about the stacking and morphology of lizardite and the serpentinization process.

780. WICKS, F.J., RAMIK, R., Royal Ontario (Mineralogy and Geology):
Thermal and evolved gas analyses of minerals, 1976-.

See:

Rapidcreekite, a new hydrated calcium sulfate-carbonate from the Rapid Creek area, Yukon Territory; Can. Mineral., vol. 24, p. 51-54, 1986.

Johnwalkite, the Mn-analogue of olmsteadite, from South Dakota; Neues Jahrbuch für Mineralogie Monatshefte, vol. 3, p. 115-120, 1986.

Rouseite, a new lead manganese arsenite from Langban, Sweden; Amer. Mineral., vol. 71, p. 1034-1036, 1986.

Montroyalite, a new hydrated Sr-Al hydroxycarbonate from the Francon Quarry, Montreal, Quebec; Can. Mineral., vol. 24, p. 455-453, 1986.

Francisoanite and orebroite, two new minerals from California and Sweden, related to redefined welinite; Amer. Mineral., vol. 71, p. 1522-1526, 1986.

Arsenites related to layer silicates: manganarsite, the arsenite analogue of manganpyrosamalite, and unnamed analogues of friedelite and schallerite from Langban, Sweden; Amer. Mineral., vol. 71, p. 1517-1521, 1986.

Mineralogy of hilgardite-4M from evaporites in New Brunswick; Can. Mineral., vol. 24, p. 689-693, 1986.

Bobfergusonite, a new primary phosphate mineral from Cross Lake, Manitoba; Can. Mineral., vol. 24, p. 599-604, 1986.

Thornagite, a new hydrous sodium thorium silicate from Mont St-Hilaire, Quebec; Can. Mineral., vol. 25, p. 181-183, 1987.

Thermogravimetric analysis with evolved gas analysis has been used to provide data on the volatile components of a variety of new minerals. TGA and DTA have been carried out in vacuum or at atmosphere, with specific furnace atmospheres, on a variety of minerals and geological materials.

INVERTEBRATE/INVERTÉBRÉS

781. BAMBER, E.W., Geol. Surv. Can.:
Carboniferous and Permian biostratigraphy and coral faunas, western and northern Canada, 1971-.

782. BAMBER, E.W., Geol. Surv. Can.:
Micropaleontology, palynology and macropaleontology of the surface and subsurface Paleozoic of the northern Yukon and western District of Mackenzie, 1985-.

783. BOLTON, T.E., Geol. Surv. Can.:
Ordovician-Silurian biostratigraphy Southampton Island, District of Keewatin, 1970-.

784. BOYCE, W.D., Newfoundland Dept. Mines and Energy:
Paleontological support, 1984-89.

See:

Trilobites in Newfoundland; Newfoundland J. of Geological Education, vol. 9, no. 1, 1986.

Stratigraphy of the Cook's Brook and Middle Arm Point Formations, Bay of Islands, western Newfoundland; GAC-MAC-CGU Ann. Meeting, Program with Abstracts, vol. 11, p. 46, 1986.

Cambrian-Ordovician trilobite biostratigraphy in central Newfoundland; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

Lower to Middle Cambrian terrigenous-carbonate rocks of Chimney Arm, Canada Bay: lithostratigraphy, preliminary biostratigraphy and regional significance; ibid., 1987.

Graptolites from the Lower-Middle Ordovician St. George and Table Head Groups, western Newfoundland, and their correlation with trilobite, graptolite, brachipod and conodont zones; Can. J. Earth Sci., vol. 23, no. 3, p. 456-470, 1987.

Detailed biostratigraphic sampling of Cambrian and Ordovician rocks in western Newfoundland for trilobites and conodonts. Provide assistance to government, university and industry geologists in critical areas of the province – collection, identification and correlation of fossils in order to resolve stratigrpahic/structural problems.

785. BRIGGS, D., COLLINS, D.H., Univ. Bristol (Geology), Royal Ontario Mus. (Invert. Pal.):
A new Middle Cambrian arthropod from Mount Stephen, British Columbia with chelicerate affinities, 1983-.

786. CALDWELL, W.G.E., COPPER, P., JIN JISUO, Univ. Saskatchewan (Geological Sciences), Laurentian Univ. (Geology):
Late Ordovician-Early Silurian rhynchonellid brachiopods of Anticosti Island, Quebec, 1984-; Ph.D. thesis (Jin).

To elucidate the external and internal morphology, biostratigraphic potential, phylogenetic development and relationships, and paleoecological importance of the Early Palaeozoic Rhychonellida, with particular emphasis on those preserved in the Late Ordovician and Early Silurian rocks of Anticosti Island.

787. CAMERON, B., Acadia Univ. (Geology):
Freshwater ostracodes, microgastropods, and calcareous algae as age indicators for the Jurassic Scots Bay Formation (Fundy Group), Nova Scotia, 1983-88.

See:

Jurassic fossils from the Scots Bay Formation; Nova Scotia Dept. Mines, Energy, Inf. Ser. No. 12, p. 167-169, 1986.

Fossils have been known from the Scots Bay Formation since the turn of the century, but identifiable microfossils were never extracted. The Scots Bay Formation is a chert-bearing, mixed carbonate and siliciclastic, non-marine unit with a maximum thickness of 8 m of exposure in the southern Fundy Basin. The formation is at the stratigraphic top of the Fundy Group in Nova Scotia. There has not yet been any definitive, well-preserved paleontological evidence of a Jurassic age for the outcrop of the Scots Bay Formation in the type area, however, a newly discovered fossil assemblage of silicified microgastropods and ostracodes indicates a Jurassic age. In addition to microgastropods and ostracodes, silicified bivalve fragments and charaphyte (algal) stems, fish(?) coprolites, small fish teeth and scales, and silicified stromatolites are being studied.

Many of the jasperoid chert nodules are centred by the well preserved woody tissue of tree trunks.

The fauna confirms the interpretation of a nearshore lacustrine paleoenvironment. Possibly, the Scots Bay lake or lakes(?) may have formed in collapse structures at the top of the North Mountain Basalt. Early silicification suggests an association with siliceous hot springs.

788. CAMERON, B., Acadia Univ. (Geology):
Freshwater ostracodes and conchostracans from the Triassic Blomidon Formation (Fundy Group), Nova Scotia, 1984-88.

Late Triassic ostracodes (**Darwinula** spp.) and conchostracans (**Cyzicus** spp.) have been discovered at numerous levels within the lower Blomidon Formation (Newark Supergroup) of the southern Fundy Basin of Nova Scotia. They occur in finely lamianted, calcareous, mudcracked shales that are probably lacustrine deposits. Meandering stream deposits are associated with them. The taxonomy, age and paleoecology of these new fossils are being investigated.

789. CAMERON, B.E.B., Geol. Surv. Can.:
Foraminiferal biostratigraphy of the Pacific Margin, 1989-.

See:

Significance of Lower Jurassic hydrocarbon source rocks in the Cumshewa Inlet area, Queen Charlotte Islands, British Columbia; Geol. Surv. Can., Paper 87-1A, p. 925-928, 1987.

790. COLLINS, D.H., WARD, P.D., Royal Ontario Mus. (Invert. Pal.), Univ. Washington (Geological Sciences):
Adolescent growth and maturity in **Nautilus**, 1978-.

791. COPELAND, M.J., Geol. Surv. Can.:
Paleozoic ostracodes of Canada, 1972-.

See:

Bullaluta kindlei n. gen., n. sp. (Ostracoda, Archaeocopida) from Zone 5 (Late Cambrian, **Cedaria-Crepicephalus**) of the Cow Head

Group, western Newfoundland; Geol. Surv. Can., Paper 86-1B, p. 399-403, 1986.

792. COSSETTE, D., LESPÉRANCE, P.J., Université de Montréal (Géologie): Ontogénie, variations intra-spécifiques-interspécifiques et évolution de quelques genres de Trinucleidae (Trilobita) de l'Ordovicien Moyen et Supérieur, 1982-87; thèse de maîtrise (Cossette).

793. DESBIENS, S., LESPÉRANCE, P.J., Université de Montréal (Géologie): Stratigraphie de l'Ordovicien au Saguenay Lac St-Jean basée sur les Trilobites, 1985-87; thèse de maîtrise (Desbiens).

794. DIVERGILIO, M., LESPÉRANCE, P.J., Université de Montréal (Géologie): Les Trilobites du Trenton (Ordovicien moyen) des Basses-Terres du Saint-Laurent, 1981-87; thèse de maitrise (Divergilio).

795. DIXON, O.A., BOLTON, T.E., COPPER, P., Univ. Ottawa (Geology), Geol. Surv. Can., Laurentian Univ. (Geology): Ordovician and Silurian heliolitid corals of Anticosti Island, Quebec and Canadian Arctic, 1968-.

See:

Ellisites, an Upper Ordovician heliolitid coral intermediate between coccoserids and proporids; Palaeontology, vol. 29, pt. 2, p. 391-413, 1986.

796. ELIAS, R.J., Univ. Manitoba (Geological Sciences): Ordovician to earliest Silurian solitary rugose corals of North America.

See:

Late Ordovician solitary rugose corals preserved in life position; Can. J. Earth Sci., vol. 23, no. 5, p. 739-742, 1986.

Research is in progress on Late Ordovician to earliest Silurian sequences in British Columbia and Alberta, the east-central United States, and Quebec, and on paleoenvironmental reconstruction using solitary rugose corals.

797. HALL, R.L., Univ. Calgary (Geology and Geophysics): Lithostratigraphy and biostratigraphy of the Fernie Formation (Jurassic), Alberta, 1978-86.

New ammonite faunas and corresponding biozones have been recorded in the Fernie representing parts of the following stages: Sinemurian, Pleinsbachian, Toarcian (Lower Jurassic); Bajocian, Bathonian (Middle Jurassic).

798. HALL, R.L., Univ. Calgary (Geology and Geophysics): Middle Jurassic ammonite faunas and stratigraphy, western Canada, 1985-89.

New collections and re-evaluation of previous collections of Middle Jurassic ammonites from Queen Charlotte Islands and mainland British Columbia. The taxonomy, biostratigraphy and paleobiogeography of these faunas will be studied.

799. HIGGINS, A.C., Geol. Surv. Can.: Carboniferous and Permian biostratigraphy and conodont faunas, western and northern Canada, 1983-.

800. HOFMANN, H.J., Université de Montréal (Géologie): Precambrian and Lower Paleozoic paleontology and stratigraphy, 1970-.

Study of megafossils, trace fossils, microfossils, and stromatolites from Precambrian and Lower Paleozoic sedimentary basins: taxonomy, paleobiology, paleoecology, and biostratigraphy.

801. JELETZKY, J.A., COLLINS, D.H., Geol. Surv. Can., Royal Ontario Mus. (Invert. Pal): Microstructure of the aulacocerid shell and the phylogenetic relationship between aulacocerid and belemnitid cephalopods, 1986-.

802. KOBLUK, D.R., Univ. Toronto (Geology): Development of an holistic coral reef growth computer simulation, 1985-.

803. KUKALOVA-PECK, J., Carleton Univ. (Geology): Evolutionary morphology of Paleozoic insects with reference to Recent insects, 1974-.

"Fossil Insects" (chapter in a textbook widely used in North America) offers, for the first time, the cladistic analysis of wing venation between all orders of winged insects (both fossil and living).

804. LESPÉRANCE, P.J., Université de Montréal (Géologie): Trilobites de l'Ashgillien de Belgique (Ordovicien Supérieur), 1974-87.

805. LESPÉRANCE, P.J., Université de Montréal (Géologie): Rainures vinculaires chez quelques Trilobites Phacopidae du Silurien et Dévonien, 1981-87.

806. LESPÉRANCE, P.J., SHEEHAN, P.M., Université de Montréal (Géologie), Milwaukee Public Mus.: Paléoécologie des Calcaires Supérieurs de Gaspé, Nord-Est de la Gaspésie (Dévonien Inférieur), 1973-87.

807. MATTHEWS, J.V., Jr., Geol. Surv. Can.: Late Cenozoic fossil insects and Late Cenozoic paleoecology, 1973-.

See:

A late glacial buried organic profile near Brookside, Nova Scotia; Geol. Surv. Can., Paper 86-1B, p. 289-294, 1986.

Plant macrofossils from the Neogene Beaufort Formation on Banks and Meighen Islands, District of Franklin; Geol. Surv. Can., Paper 87-1A, p. 73-87, 1987.

Plant macrofossils, pollen, and insect fossils of arctic affinity from Wisconsinan sediments in Chaudière Valley, southern Quebec; ibid., p. 165-175, 1987.

Periglacial and interglacial environments of Banks Island: pollen and macrofossils from Duck Hawk Bluffs and related sites; Geographic Physique et Quaternaire, vol. 40, no. 3, p. 279-298, 1986.

808. MCGUGAN, A., Univ. Calgary (Geology and Geophysics): Living benthic Foraminifera, west coast British Columbia Turbulent Zone, relation to substrate temperature, Ph., etc.

We are finding microenvironments related to above factors and also "deep water" Foraminifera in shallow parts of fiords.

809. MCGUGAN, A., Univ. Calgary (Geology and Geophysics): Cretaceous Foraminfera, Parksville area surface and subsurface eastern Vancouver Island, British Columbia.

810. MCGUGAN, A., HENDERSON, C., Univ. Calgary (Geology and Geophysics): Permian conodont biostratigraphy; Ph.D. thesis (Henderson).

See:

Permian conodont biostratigraphy of the Isabel Group, southwestern Alberta and southeastern British Columbia; Univ. Wyoming, Contrib. geol., vol. 24, no. 2, p. 219-235, 1986.

811. MCNEIL, D.H., Geol. Surv. Can.: Mesozoic and Cenozoic Foraminifera of the Arctic western mainland of Canada, 1978-.

812. MCNEIL, D.H., Geol. Surv. Can.: Macropaleontology, micropaleontology and palynology of the Mesozoic and Lower Tertiary of the northern Yukon and western District of Mackenzie, 1985-.

813. MUNRO, I., DIXON, O.A., NOWLAN, G.S., Univ. Ottawa (Geology): Conodont biostratigraphy of Lower Ordovician rocks in the Ottawa-Brockville-Montreal region, 1983-87; Ph.D. thesis (Munro).

814. NOBLE, J.P.A., YOUNG, G.H., LEE, D.J., Univ. New Brunswick (Geology): Silurian tabulate corals of the circum-Atlantic region, 1981-.

See:

The Llandovery-Wenlock Syringoporidae from New Brunswick, Canada; J. Paleontol., vol. 61, no. 2, p. 268-283, 1987.

815. NORRIS, A.W., Geol. Surv. Can.: Brachiopods of the lower Upper Devonian Waterways Formation of northeastern Alberta, 1977-.

816. NOWLAN, G.S., Geol. Surv. Can.: Paleozoic conodonts of eastern Canada, 1977-.

See:

Application of conodont colour alteration indices to regional and economic geology; Conodonts: Investigative techniques and applications, p. 188-202, 1986.

817. ORCHARD, M.J., Geol. Surv. Can.: Conodont biostratigraphy and biogeography in the Canadian Cordillera, 1981-.

See:

Conodont biostratigraphy and correlation of the Harper Ranch Group (Devonian-Permian), Ashcroft map area, southern British Columbia; Geol. Surv. Can., Paper 87-1A, p. 743-749, 1987.

Conodonts from western Canadian chert: their nature, distribution and stratigraphic application; Conodonts: Investigative techniques and applications, p. 94-119, 1986.

818. PICKERILL, R.K., FILLION, D., Univ. New Brunswick (Geology): Ichnology of the Lower Ordovician Bell Island and Wabana groups, eastern Newfoundland, 1980-88.

A memoir on the trace fossils (116 ichnospecies) is currently in revision having undergone referring by reviewers of Palaeontographica Canadiana.

819. PICKERILL, R.K., FILLION, D., MCCANN, T., Univ. New Brunswick (Geology): Marine to non-marine ichnology of selected Phanerozoic sequences in North America, 1976-; Ph.D. thesis (Fillion), M.Sc. thesis (McCann).

See:

The trace fossil **Yakutatia emersoni** from the Cretaceous Kodiak Formation of Alaska; Can. J. Erth Sci., vol. 23, p. 262-269, 1986.

Research continues in several selected sequences including the Cretaceous Hornbrook Formation (California and Oregon), the Ordovician-Silurian Matapedia Group (New Brunswick and Gaspe) and the Cambro Ordovician Meguma Group (Nova Scotia). Six articles are currently in press on selected aspects of ichnological research.

820. PINARD, S., MAMET, B., Université de Montréal (Géologie): Foraminifères des Formations Nansen, Otto Fiord, Belcher Channel, Bassin de Sverdrup (Ellesmere, Axel Heiberg), 1984-88; thèse de doctorat (Pinard).

Taxonomie des petits Foraminifères du Carbonifère et du Permien inférieur. Phylogénie des Endothyridae dans l'Arctique canadien.

821. RIGBY, J.K., COLLINS, D.H., Brigham Univ. (Geology), Royal Ontario Mus. (Invert. Pal.): The sponges from the Middle Cambrian **Ogygopsis** trilobite bed, Mt. Stephen, British Columbia, 1986.

822. TOZER, E.T., Geol. Surv. Can.: Canadian Triassic Ammonoidea and Bivalvia, 1967-.

823. UYENO, T.T., Geol. Surv. Can.: Conodont biostratigraphy of Siluro-Devonian rocks of the Arctic Islands, 1968-.

824. VILKS, G., Geol. Surv. Can.: Quaternary biostratigraphic methods for marine sediments, 1983-.

825. VON BITTER, P.H., Royal Ontario Mus. (Invert. Palaeontology), Univ. Toronto (Geology): The taxonomy, phylogeny and palaeoecology of selected Early Carboniferous conodonts, 1981-.

See:

Phylogeny, speciation and palaeoecology of the Early Carboniferous (Mississippian) conodont genus **Mestognathus**; Royal Ontario Mus., Life Sciences Contrib., vol. 143, p. 1-114, 1986.

826. VON BITTER, P.H., Royal Ontario Mus. (Invert. Palaeontology), Univ. Toronto (Geology): Conodont biostratigraphy and palaeoecology, Pennsylvanian and Permian, Arctic Islands, Canada, 1982-.

Detailed sampling in 1982 of the Tanquary Fiord area, Ellesmere Island, was followed by sampling on the Sabine Peninsula, Melville Island, in 1984.

827. VON BITTER, P.H., DAVISON, N., MCFARLAND, S., Royal Ontario Mus. (Invert. Palaeontology), Univ. Toronto (Geology): Late Ordovician conodonts of the Georgian Bay Formation, Toronto region, Ontario, 1983-; M.Sc. thesis (Davison).

828. VON BITTER, P.H., MERRILL, G.K., Royal Ontario Mus. (Invert. Palaeontology), Univ. Toronto (Geology), Univ. Houston: Pennsylvanian conodonts of North America — their taxonomy, palaeoecology and biostratigraphy, 1968-.

829. VON BITTER, P.H., PLINT-GEBERL, H., DHINDSA, R., DUDAR, C., WESTON, D., Royal Ontario Mus. (Invert. Palaeontology), Univ. Toronto (Geology): Palaeoecology and biostratigraphy of Lower Carboniferous (Windsor and Codroy groups) conodonts, Atlantic Provinces, Canada, 1971-; M.Sc. theses (Plint-Geberl, Dhindsa).

See:

Conodonts of the Windsor Group (Lower Carboniferous), Magdalen Islands, Quebec, Canada; J. Paleont., vol. 61, p. 346-362, 1987.

Windsor Group (Lower Carboniferous) conodont biostratigraphy and palaeoecology, Magdalen Islands, Quebec: Can. J. Earth Sci., vol. 23, p. 439-453, 1986.

830. WALL, J.H., Geol. Surv. Can.:
Reconnaissance of Mesozoic Foraminifera of Arctic Islands, 1972-.

831. WILLIAMS, S.H., STEVENS, R.K., Memorial Univ. (Earth Sciences):
Tremadoc and Arenig graptolite biostratigraphy of the Cow Head Group, western Newfoundland, 1983-87.

To revise biostratigraphy and graptolite taxonomy from Late Tremadoc to Late Arenig in western Newfoundland.

VERTEBRATE/VERTÉBRÉS

832. DINELEY, D.L., LOEFFLER, E.J., Univ. Bristol U.K. (Geology):
Early vertebrates from the Late Silurian/Early Devonian of Somerset and Prince of Wales Island, Northwest Territories, Canada, 1964-.

833. EDMUND, G., Royal Ontario Museum (Vert. Palaeontology):
A review of the genus **Eremotherium** (Edentata, Mammalia), 1958-89.

834. EDMUND, G., Royal Ontario Museum (Vert. Palaeontology):
Tertiary and Quaternary radiation of the giant armadillos (Pampatheriidae: Mammalia) in South America, 1964-88.

Two major lineages, based mainly on osteoderms, represent most pampathere species. Two new species are recognized from Argentina-Uruguay, and another from the La Venta Miocene fauna of Colombia. Several papers are in various stages of preparation.

835. EDMUND, G., Royal Ontario Museum (Vert. Palaeontology):
Osteology and functional morphology of the Pleistocene giant armadillo **Holmesina septentrionalis** (Pampatheriidae, Xenarthra, Mammalia), 1965-88.

836. EDMUND, G., Royal Ontario Museum (Vert. Palaeontology):
Evolution of a single phyletic line of giant armadillos (Pampatheriidae, Mammalia) in Florida during the Pleistocene, 1975-87.

See:

Evolution of **Holmesina** (Pampatheriidae, Xenarthra, Mammalia) in Florida; Pierce-Sellards Series, Univ. Texas, Texas Memorial Mus., 1987.

837. EDMUND, G., Royal Ontario Museum (Vert. Palaeontology):
The Daytona Beach bonebed, a (?) Sangamonian deposit from Volusia Co., Florida, 1975-89.

Contributions from two collaborators are in hand, and the remainder are expected in 1988. Identification of the small vertebrates by Kevin Seymour, R.O.M. increased the variety of the fauna and reinforces the botanical conclusion of the proximity to fresh water. Assuming prompt submissions from collaborators, the manuscript should be submitted in 1989.

838. EDMUND, G., Royal Ontario Museum (Vert. Palaeontology):
A well-preserved giant armadillo (Pampatheriidae, Mammalia) from the Miocene of Argentina, 1985-87.

839. EDMUND, G., Royal Ontario Museum (Vert. Palaeontology):
The giant armadillo (Pampatheriidae, Mammalia) from La Venta, Miocene of Colombia, 1985-87.

Originally, and incorrectly identified by others as **Kraglievichia**, this early pampathere is now known from more complete material which has been prepared by acid dissolution. It represents a new taxon and will be described, along with speculations on its relationships. Completion of manuscript is expected in 1987.

840. EDMUND, G., MCANDREWS, J., Royal Ontario Museum (Vert. Palaeontology):
Quaternary paleoecology of a sinkhole and watercourses in Sarasota Co., Florida, 1984-.

841. EDMUND, G., MCANDREWS, J., ROYAL, C.W., Royal Ontario Museum (Vert. Palaeontology):
A Quaternary fossil site with associated human worked artefacts, Sarasota Co., Florida, 1987-90.

A rich accumulation of highly mineralized bones and plant material was collected at the juncture of an artesian spring, a buried humic-filled channel and a warm spring run-off. Bone and lithic artefacts have been found along with Rancholabrean bone, but stratigraphic work has only begun.

842. EDMUND, G., MCDONALD, G., Royal Ontario Museum (Vert. Palaeontology):
A description of Scelidodon from the Pleistocene tar seeps of Ecuador and Peru, and review of the scelidotheres (Mylodontidae, Mammalia), 1978-85; Ph.D. thesis (McDonald).

Much of the manuscript, illustrations, tables and statistics are complete. A large numer of taxa have been shown to be junior synonyms or indeterminate, and new data are presented on the phylogeny of the scelidotheres. Thesis definse (oral) in April 1987. Final defence expected September 1987.

843. EDMUND, G., SEYMOUR, K., Royal Ontario Museum (Vert. Palaeontology):
A vertebrate fauna of Holocene Age from Lake Flirt deposits of Sarasota Co., Florida, 1984-88.

844. MOSSMAN, D.J., Mount Allison Univ. (Geology):
Vertebrate footprints from Mississippian and Pennsylvanian sediments in Nova Scotia – compilation and description of all known forms, 1974-90.

Systematic description and cataloguing of all known vertebrate footprints from the Nova Scotian Mississippian sediments.

845. STORER, J.E., Saskatchewan Mus. Nat. Hist.:
Eocene-Oligocene mammals of the Cypress Hills Formation (Uintan-Chadronian) of Saskatchwan, 1979-.

Current work centres on two local faunas from the Lac Pelletier area. The earlier of these faunas appears to be latest Eocene (Duchesnean). New localities have been discovered, and paleomagnetic work has begun.

846. STORER, J.E., TOKARYK, T.T., Saskatchewan Mus. Nat. Hist.:
Late Cretaceous terrestrial vertebrates of Saskatchewan, 1984-.

See:

Ceratopsian dinosaurs from the Frenchman Formation (Upper Cretaceous) of Saskatchewan; Can. Field-Naturalist, vol. 100, no. 2, p. 192-196, 1986.

Further work in the latest Cretaceous Frenchman Formation of the Frenchman Valley yielded additional specimens. A new locality in the Frenchman Formation of the Old Man on His Back Plateau is producing a diverse fauna, including mammals.

847. WILSON, M.V.H., Univ. Alberta (Zoology):
Eocene lake environments and fish taphonomy, 1975-.

A review is in press in Paleo 3. Current research is on role of predation in death of fish, and on rate of morphological evolution in one section.

848. WILSON, M.V.H., Univ. Alberta (Zoology):
Eocene fossil fishes of western North America, 1975-.

Emphasis on species of sucker genus **Amyzon**, and on Eocene/Oligocene fish fauna of Kishenehn Formation, Montana.

849. WILSON, M.V.H., Univ. Alberta (Zoology):
Paleocene freshwater fishes of western Canada, 1978-.

Fauna now includes at least eight species of teleosts in seven families. Excavation of a mass-mortality layer continues.

850. WILSON, M.V.H., Univ. Alberta (Zoology):
Marine Mesozoic fishes of western Canada, 1983-.

Faunal study in progress on Turonian marine teleost fish from Alberta.

851. WILSON, M.V.H., WIGHTON, D.C., Univ. Alberta (Zoology):
Fossil insects from the Paleocene of western Canada, 1975-.

See:

The Gomphaeschninae (Odonata: Aeshnidae): new fossil genus, reconstructed phylogeny, and geographical history; Systematic Entomology, vol. 11, p. 505-522, 1986.

PALEOBOTANY/PALYNOLOGY/ PALÉOBOTANIQUE ET ANALYSE POLLINIQUE

852. BARSS, M.S., Geol. Surv. Can.:
Palynological zonation of the Carboniferous and Permian rocks of Atlantic Provinces, Gulf of St. Lawrence and northern Canada, 1968-.

853. BASINGER, J.F., Univ. Saskatchewan (Geological Sciences):
Early Tertiary fossil floras of western Canada, 1973-.

854. BASINGER, J.F., Univ. Saskatchewan (Geological Sciences):
Early Tertiary floras of the Eureka Sound Group, Arctic Canada, 1982-.

855. BASINGER, J.F., ASH, S.R., Univ. Saskatchewan (Geological Sciences):
Late Triassic plants from the Heiberg Formation, Arctic Canada, 1985-.

856. BASINGER, J.F., DILCHER, D.L., Univ. Saskatchewan (Geological Sciences):
Early bisexual flowers from the Cenomanian Dakota Formation of Kansas and Nebraska, 1980-.

857. BROATCH, J., ROUSE, G.E., Univ. British Columbia (Geological Sciences):
Palynological zonation and correlation of the Peace River coalfield, northeastern British Columbia, 1981-; M.Sc. thesis (Broatch).

See:

Palynological zonation and correlation of the Peace River coalfield, northeastern British Columbia; British Columbia Ministry Energy, Mines, Petrol. Res.,Paper 1986-1, p. 321-326, 1986.

Palynological zonation and correlation of the Peace River coalfield an update; ibid., Paper 1987-1, p.379-382, 1987.

Large assemblages of both spores/pollen and dinocysts have been used to plot the terrestrial vs. marine units. Species of both groups have limited ranges and hence have been applied to correlation from north to south.

858. CHOW, S., BASINGER, J.F., Univ. Saskatchewan (Geological Sciences):
Palynology of the lower Ravenscrag Formation, southwestern Saskatchewan, 1986-89; M.Sc. thesis (Chow).

859. CLEAL, C.J., ZODROW, E.L., Nature Conservancy Council, England, Univ. College of Cape Breton (Geology):
Cuticular study of **Neuropteris ovata** and its allies from Canada and the Saarland, 1975-85; Ph.D. thesis (Cleal).

Cuticle morphologies are used for species determination for **ovata** correlation with Europe.

860. DAVIS, A.M., BEECH-KENNEDY, M., WICKHAM, S., Univ. Toronto, Erindale College (Geography):
Causes and consequences of paludification in Newfoundland, 1983-; M.Sc. thesis (Beech-Kennedy).

See:

The microstratigraphy of two peat sequences from northeastern Newfoundland; Géographie Physique et Quaternaire, 1987.

861. DAVIS, A.M., CRAWFORD, G., Univ. Toronto, Erindale College (Geography, Anthropology):
Archeology and paleoenvironment in Hokkaido, Japan, 1983-.

862. DEMCHUK, T.A., Univ. Alberta (Geology):
Palynological zonation of the Paleocene Scollard and Paskapoo formations in Alberta, 1985-87; M.Sc. thesis.

All six palynological zones of the Paleocene (P1 to P6) are represented in the combined Scollard and Paskapoo Formations, although the youngest Paleocene (top of P6) is probably not present.

863. EDLUND, S.A., Geol. Surv. Can.:
Vegetation distribution and relationships to surficial materials and climatic patterns, Arctic region, 1976-.

864. FENSOME, R.A., Geol. Surv. Can.:
Biostratigraphy of the Atlantic Shelf and relevant areas, 1981-.

865. FORMAN, R.T., ROUSE, G.E., Univ. British Columbia (Geological Sciences):
Palynostratigraphy and thermal maturation of three Beaufort Sea wells, 1984-87; M.Sc. thesis (Forman).

Spores and pollen and algal cysts have been recovered from 3 wells, one near shore, the others offshore, and zonation established from Pleistocene to Eocene. TAI and vitrinite reflectance have also been plotted to show the maturation gradient with depth.

866. **LAPOINTE, M., MAMET, B.,** Université de Montréal (Géologie): Algues ordoviciennes et siluriennes de l'île d'Anticosti (Québec), 1985-87; thèse de maîtrise (Lapointe).

Taxonomie de 22 genres de Codiacées, Coccoides, Dasycladacées des formations Vauréal à Chicotte.

867. **LICHTI-FEDEROVICH, S.,** Geol. Surv. Can.: Diatom analysis and paleoecological studies of Quaternary sediments, 1972-.

See:

Diatom dispersal phenomena: diatoms in precipitation samples from Cape Herschel, east-central Ellesmere Island, Northwest Territories — a quantitative assessment; Geol. Surv. Can., Paper 86-1B, p. 263-269, 1986.

868. **LYNGBERG, E., ROUSE, G.E.,** Univ. British Columbia (Geological Sciences): The Orpheus Graben: palynology, organic geochemistry, thermal maturation, and time-temperature history, 1984-.

To apply palynology to date the units ranging from Triassic to Upper Cretaceous, and to match the colour changes to vitrinite reflectance and pyrolysis data. Burial history diagrams are given for 6 wells, and burial diagrams for the basin cross section shown for 2 models, one with minimal Tertiary deposition, the other with up to 2000 m of Tertiary strata.

869. **MATHEWS, W.H., ROUSE, G.E.,** Univ. British Columbia (Geological Sciences): Stratigraphy and palynology of Tertiary sediments in central British Columbia, 1979-87.

870. **MCGREGOR, D.C.,** Geol. Surv. Can.: Silurian and Devonian spores of Canada, 1975-.

See:

Silurian and Devonian spore zones of the Old Red Sandstone continent and adjacent regions; Geol. Surv. Can., Bull. 364, 1986.

871. **MCINTYRE, D.J.,** Geol. Surv. Can.: Upper Mesozoic and Cenozoic palynology of western and northern Canada, 1982-.

See:

The Eureka Sound Group of eastern Axel Heiberg Island: new data on the Eurekan Orogeny; Geol. Surv. Can., Paper 86-1B, p. 405-410, 1986.

872. **MCIVER, E.E., BASINGER, J.F.,** Univ. Saskatchewan (Geological Sciences): Fossil flora of the Paleocene, Ravenscrag Formation, southwestern Saskatchewan, 1984-89; Ph.D. thesis (McIver).

873. **MOTT, R.J.,** Geol. Surv. Can.: Quaternary palynology, 1969-.

See:

A late glacial buried organic profile near Brookside, Nova Scotia; Geol. Surv. Can., Paper 86-1B, p. 289-294, 1986.

Plant macrofossils, pollen, and insect fossils of arctic affinity from Wisconsinan sediments in Chaudière Valley, southern Quebec; Geol. Surv. Can., Paper 87-1A, p. 165-175, 1987.

874. **NORRIS, G., HEAD, M.J.,** Univ. Toronto (Geology): Miocene palynostratigraphy of ODP Leg 105, Site 645 (Baffin Bay) and Paleogene palynostratigraphy of ODP Leg 105, Site 647 (Labrador Sea), 1986-87.

See:

Paleogene palynology of ODP site 647, Leg 105, Labrador Sea-preliminary results; Amer. Assoc. Stratigraphic Palynologists, 19th Ann. Mtg. New York, Program and Abstracts, p. 16, 1986.

Late Miocene palynology of site 646, ODP Leg 105, Labrador Sea-preliminary results; ibid., p. 15, 1986.

The erection of a palynological zonations for the Eocene, Oligocene and Late Miocene of the Labrador Sea, and Miocene of Baffin Bay, based on dinoflagellates from ODP Leg 105 samples is in progress. Dinocyst assemblages are being studied to understand more about their paleoecology. Palynologic and other ODP Leg 105 data is being used to interpret paleoceanographic and climatic evolution of the Labrador Sea and Baffin Bay during the Tertiary.

875. **SWEET, A.R.,** Geol. Surv. CAn.: Palynological studies of Mesozoic and Tertiary coal measures in western and northern Canada, 1971-.

See:

Caliche and associated impoverished palynological assemblages: an innovative line of paleoclimate research into the uppermost Cretaceous and Paleocene of southern Alberta; Geol. Surv. Can., Paper 86-1B, p. 653-663, 1986.

876. **SWEET, A.R.,** Geol. Surv. Can.: Macropaleontology, micropaleontology and palynology of Devonian, Cretaceous and Tertiary rocks of the Interior Plains, 1985-.

See:

Stratigraphy, sedimentology and palynology of the Kootenay-Blairmore transition in southwestern Alberta and southeastern British Columbia; Geol. Surv. Can., Paper 84-15, 1986.

The Cretaceous-Tertiary boundary in the central Alberta Foothills. I: Stratigraphy; II: Miospore and pollen taxonomy; Can. J. Earth Sci., vol. 23, no. 9, p. 1356-1388, 1986.

877. **UTTING, J.,** Geol. Surv. Can.: Palynology of Carboniferous, Permian and Triassic rocks of northern and western Canada, 1981-.

878. **WILLIAMS, V.E., ROUSE, G.E.,** Univ. British Columbia (Geological Sciences): Palynological study of the continental shelf sediments of the Labrador Sea, 1979-86; Ph.D. thesis (Williams).

Zonation of Tertiary sediments using spores and pollen, with 7 zones established for the interval mid Paleocene to mid Miocene. Four major populations of recycled palynomorphs also identified, viz. Paleozoic, Upper Jurassic/Lower Cretaceous, Upper Cretaceous, and Paleogene. The climatic optimum occurred in the early to mid Eocene.

879. **ZODROW, E.L.,** Univ. College of Cape Breton (Geology): Phyto- and chronostratigraphical correlations: Europe-northeastern North America, Upper Carboniferous of the world, 1973-.

See:

Succession of paleobotanical events: evidence for mid-Westphalian D floral changes, Morien Group (Late Pennsylvanian, Nova Scotia); Rev. Palaeobotany and Palynology, vol. 47, p. 293-326, 1986.

Basic correlation unit is a floral zone: specified sequence of events such as occurrence/ disappearance/ frequency/diversity of easily recognizable plants (philosophy of support: punctuated equilibrium theory). Companion investigations include Sphenophyll and Pecopterid studies.

880. ZODROW, E.L., VASEY, G.M., Univ. College of Cape Breton (Geology), Strathclyde Univ., Glasgow (Applied Geology): Biostratigraphy and correlation of Mabou Mines, Nova Scotia, 1981-85.

See:

Mabou Mines section: biostratigraphy and correlation (Pennsylvanian Pictou Group, Nova Scotia, Canada); J. Paleontol., vol. 60, p. 208-232, 1986.

Flora and fauna are not diversified; the flora consists mainly of seed-fern representatives and the fauna of **Anthraconauta**, **Carbonita**, and **'Leaia'** spp. The age is late Westphalian C to early D.

PETROLOGY/PÉTROLOGIE

EXPERIMENTAL/EXPÉRIMENTAL

881. BREARLEY, M.,
DICKINSON, J.E.,
SCARFE, C.M., Univ. Alberta (Geology):
Pressure dependence of melt viscosities on the join diopside-albite.

See:

Viscosity-temperature relationships of melts at one atmosphere on the system diopside-albite; Amer. Mineral., vol. 71, p. 767-771, 1986.

The pressure dependence of melt viscosities on the join diopside-albite has been studied using falling-sphere viscometry. Experiments were performed at 1500°C and 1600°C and at pressures of 5, 10, 15, 20 and 25 kbar. The positive and negative pressure dependence of the viscosity of diopside and albite, respectively, were confirmed. All intermediate compositions show an initial decrease in viscosity with increasing pressure; however, melt of $Ab^{25}Di^{75}$ composition passes through a minimum viscosity at approximately 12 kbar and 1600°C. This behaviour is analogous to the variation in the viscosity of water with pressure at low temperature. It is probable that relatively polymerized magmas (e.g. rhyolites to SiO_2-saturated basalts) show a negative pressure dependence of viscosity to depths where they originate in the lower crust or upper mantle. In contrast, the most depolymerized, naturally occurring melts, such as strongly SiO_2-undersaturated basalts and picrites, may exhibit a viscosity minimum. The viscosity of these melts may be sufficiently high at depths within the upper mantle to inhibit their segregation, rise and eventual eruption at the surface.

882. BREARLEY, M., SCARFE, C.M., Univ. Alberta (Geology): Dissolution rates of upper mantle minerals in an alkalic basalt melt at high pressure.

The dissolution rates of the major upper mantle minerals, olivine, orthopyroxene, clinopyroxene, spinel and garnet have been determined in an alkali basalt melt at superliquidus temperatures and 5, 12 and 30 kbar. The relative rates of dissolution of the minerals at each pressure are governed by their relative stabilities in the melt (i.e. liquidus mineralogy). Olivine has a slower dissolution rate than clinopyroxene at low pressure, wheras clinopyroxene has a slower dissolution rate than olivine at higher pressure. Spinel has the slowest dissolution rate at each pressure and garnet dissolves very rapidly at low pressure. A model has been constructed that predicts the survival of ultramafic xenoliths in alkali basalt magmas as a function of xenolith radius, magma ascent time and superheating.

883. CANIL, D., BREARLEY, M., SCARFE, C.M., Univ. Alberta (Geology): Petrology of upper mantle xenoliths from Rayfield River, south-central British Columbia; M.Sc. thesis (Canil).

Approximately 100 mantle xenoliths were collected from an alkali basalt flow of Miocene age near Rayfield River, south central British Columbia. The massive host basalt contains subrounded xenoliths which show granular textures, and range in size from 1-10 cm. Both chrome diopside-bearing and aluminous augite-bearing xenoliths are represented. The xenolith assemblage consists of spinel lherzolite (62%), with lesser amounts of dunite (12%), websterite (12%), harzburgite (11%), cinopyroxenite (2%) and wehrlite (1%). Banding on a cm scale is present in four xenoliths.

Partial melting at the grain boundaries of clinopyroxene is common, and may be due to decompression during ascent or by heating from the host magma during transport. Equilibration temperatures for the xenoliths are between 880-960°C using the Wells (1977, CMP) geothermometer. The depth of equilibration using phase equilibrium constraints is 26 to 53 km. These depths and temperatures of equilibration compare with other xenolith occurrences in southern British Columbia, implying that no variation of the geotherm occurred in this region during the Miocene.

884. DICKINSON, J.E.,
SCARFE, C.M., Univ. Alberta (Geology):
Pressure induced structural changes in $K_2Si_4O_9$ melt.

The pressure dependence of the density of $K_2Si_4O_9$ glass (melt quenched from 1200°C) and viscosity of the melt at 1200°C were determined up to a pressure of 24 kbar. Raman spectra of the glasses were collected to relate the changes in melt physical properties to changes in melt structure. The spectroscopic data suggest that the changes observed in the glass density and viscosity versus pressure curves are due to a reorganization of the melt structure to include units that are more and less polymerized than those present in the 1 atm glass. The pressure range over which this takes place is 10 to 16 kbar. Further, the similarity in behaviour of the glass density and viscosity versus pressure curves to those for albite and jadeite melts indicates that the inflections in those curves are not due to a change in the coordination of Al.

885. DUNN, J.T., SCARFE, C.M., Univ. New Brunswick (Geology); Univ. Alberta (Geology):
Variation of the chemical diffusivity of oxygen and viscosity of andesite melt with pressure at constant temperature.

See:

Chem. Geol., vol. 54, p. 203-215, 1986.

The chemical diffusivity of oxygen and the viscosity of an andesite melt have been measured at pressures from 3.5 to 20 kilobars and 1350°C. Oxygen chemical diffusivity and melt viscosity vary antithetically as a function of pressure. The melt viscosity increases from 1 bar to 3.5-5 kilobars, passes through a maximum, and then decreases with further increase in pressure to at least 20 kilobars. The chemical diffusivity of oxygen decreases from 1 bar to 5 kilobars, passes through a minimum, increases from 5 to 10 kilobars, and then remains essentially constant with increasing pressure. In all cases the chemical diffusivity of oxygen is larger than predicted by the Eyring equation. The results, when combined with data for basalt melts, show that the relationship between the chemical diffusivity of oxygen and melt viscosity is not adequately expressed by the Eyring equation. A model was devised to predict oxygen chemical diffusivities from melt viscosities. The model diffusivities suggest that oxygen chemical diffusion is comparable in magnitude to divalent cation diffusivities in low viscosity melts, but that oxygen diffuses much more slowly than cations in high viscosity melts.

886. FUJU, T., SCARFE, C.M., Univ. Tokyo, Univ. Alberta (Geology):
Petrology of crystal clots in the pumice of Mount St. Helens March 19, 1982 eruption.

A petrographic, mineralogical and chemical description of the dacite pumice and mafic crystal clots from the March 19, 1982 eruption of Mount St. Helens has been performed. The crystal clots are interpreted as cumulates and the phenocryst phases in the pumice are not fully representative of phases fractionating at depth. The crystallization sequence is inferred to be olivine plus plagioclase followed by pyroxenes and late stage amphibole. Magnetite and ilmenite crystallized early, providing a mechanism for minimal iron enrichment.

Using Fe-Ti oxide and two pyroxene geothermometers, crystallization temperatures were ~1000°C at oxygen fugacities approximately one order of magnitude higher than the NNO buffer. Water contents in the magma were low, except during late stage crystallization of hornblende.

887. GREENWOOD, H.J., DECAPITANI, C., Univ. British Columbia (Geological Sciences):
XRD and Mössbauer study of non-ideal solid solution in Fe-Mg-Mn olivines, 1984-87; Ph.D. theses (deCapitani).

Peak intensity of XRD reveals Mn/Mg ordering with high precision, and Mössbauer demonstrates the Fe/Mg ordering. Thermodynamic models of non-ideal solutions allow computation of other equilibria involving olivine.

888. JUNG, J.A., SCARFE, C.M., Univ. Alberta (Geology):
Pressure dependence of the glass transition temperature, Tg.

Using in situ DTA methods in an internally heated vessel, we are investigating the glass transition temperature of several glass compositions of geological interest. The kinetics of the glass transition and its pressure dependence are of considerable interest because of current efforts to understand the properties and structures of silicate melts and glasses.

889. METCALFE, P., SCARFE, C.M., Univ. Alberta (Geology):
Petrogenesis of recent alkaline lavas in the eastern Anahim volcanic belt of the Canadian Cordillera; Ph.D. thesis (Metcalfe).

Lavas erupted from 10 centers range in composition from transitional olivine basalt (preglacial) to basanitoid (syn- and postglacial). Phenocryst phases are forsteritic olivine and titaniferous augite. Xenocrysts of forsteritic olivine, clinopyroxene and rare plagioclase are present in all lavas. Xenoliths of spinel lherzolite and clinopyroxenite are present in postglacial lavas and in some synglacial lavas, suggesting rapid transit from source regions. Major element variation within individual centers can be accounted for by less than 10% fractionation of olivine and clinopyroxene. The variation of incompatible elements requires a significantly greater amount of fractionation. Nd and Sr isotopes in selected samples indicate that the source regions for each volcano are different and that significant differences occur between magma pulses in individual centers.

890. MONTGOMERY, K., DUNN, J.T., SCARFE, C.M., Univ. Alberta (Geology), Univ. New Brunswick (Geology):
The dissolution of natural sodalite in water and brines; Ph.D. thesis (Montgomery).

The dissolution of natural sodalite was examined in unbuffered and pH buffered solutions and in artificial brines at 50°C. The release rates of Na and Cl in unbuffered solutions were found to be strongly time-dependent, while Si and Al exhibited a constant release rate. The Na and Cl release rates were fitted to a rate law of the form $R = a + b \ln(t)$, whereas Si and Al release rates were fitted to a law of the form $R = a + bt$. The minimum release for each element was found to occur at a pH of approximately 8.0. The mechanism of dissolution is via a surface reaction.

891. MONTGOMERY, K., GUNTER, W.D., SCARFE, C.M., Univ. Alberta (Geology), Alberta Research Council:
The dissolution and precipitation kinetics of calcite and dolomite in aqueous solutions at elevated temperature and pressure.

The dissolution and precipitation kinetics of calcite and dolomite are being examined in aqueous solutions at temperatures

100°-300°C and pressures 1-100 atm PCO_2. The experiments are conducted in static as well as dynamic conditions. The results of the research will be applied to problems involving carbonate reactions and mass transfer in hydrothermal solutions. In particular, the results have direct application to problems associated with the recovery of bitumen from oil sands.

892. SCARFE, C.M., DICKINSON, J.E., SYKES, D., CRONIN, D., Univ. Alberta (Geology):
Properties and structure of melts in system albite-anorthite-diopside at 1 atm; M.Sc. thesis (Sykes).

Several studies have investigated the relationship between the viscosity and molecular structure of melts along the binary joins and in the ternary system. Viscosities were measured with a concentric cylinder viscometer and melt (glass) structures were determined by Raman and infrared spectroscopy.

893. SPRAY, J.G., Univ. New Brunswick (Geology):
Laboratory simulation of shear heating effects on fault planes, 1985-.

See:

Artificial generation of pseudotachylyte using friction welding apparatus: simulation of melting on a fault plane; J. Structural Geol., vol. 9, p. 49-60, 1987.

894. TAKAHASHI, E., SCARFE, C.M., Univ. Okayama, Univ. Alberta (Geology):
Melting of peridotite to 14 GPa and the genesis of komatiite.

See:

Melting of garnet peridotite to 13 GPa and the early history of the upper mantle; Nature, vol. 322, p. 354-356, 1986.

This study represents the first melting experiments on mantle peridotite above 40 Kbar (4GPa). The major technological innovation was the use of the Okayama University uniaxial split-sphere apparatus. We showed that partial melts close to the solidus at 5-7 GPa are komatiitic and we discussed a simple diapiric model for their genesis in the Archean. Previous models for low pressure generation of komatiitic liquids required unreasonably high degrees of partial melting. A second paper confirmed the convergence of the solidus and liquidus at pressures close to 15 GPa and discussed this constraint in terms of the petrological evolution of the upper mantle and the possible presence of a magma ocean in the early Archean. A third paper has now extended the work to 25 GPa, pressures equivalent to the region between the upper and lower mantles.

895. XUE XIANYU, BAADSGAARD, H., SCARFE, C.M., Univ. Alberta (Geology):
Petrology and isotope geochemistry of ultramafic xenoliths from British Columbia; M.Sc. thesis (Xue).

Isotope studies of approximately 10 mantle xenoliths from late Cenozoic alkali basalt flows at West Kettle River, British Columbia. Four isotope systems will be investigated: Sr, Nd, Pb and O. Samples have been chosen to represent the diverse mineralogy of mantle samples from this single locality — to characterize the upper mantle beneath southern British Columbia and to discuss its evolution.

IGNEOUS/ROCHES IGNÉES

896. BARAGAR, W.R.A., Geol. Surv. Can.:
Stratigraphy and petrology of the Natkusiak Basalts, Victoria Island, District of Franklin, 1975-.

897. CURRIE, K.L., Geol. Surv. Can.:
Alkaline rocks in Canada, 1968-.

See:

Geochronology of retrogressed granulites from Wilson Lake, Labrador; Geol. Surv. Can., Paper 85-1B, p. 191-197, 1985.

898. CURRIE, K.L., Geol. Surv. Can.:
Granite studies in the Appalachians, 1973-.

See:

Late Precambrian igneous activity and its tectonic implications, Musquash-Loch Alva region, New Brunswick; Geol. Surv. Can., Paper 87-1A, p. 663-671, 1987.

The age of igneous and metamorphic events in the western Cape Breton Highlands, Nova Scotia; Can. J. Earth Sci., vol. 23, no. 12, p. 1891-1901, 1986.

899. CURRIE, K.L., Geol. Surv. Can.:
Geology of the Northern Long Range Mountains, Newfoundland and adjacent areas, 1984-.

900. DAVIDSON, A., Geol. Surv. Can.:
Granite studies in the Ennadai-Rankin Inlet region, District of Keewatin, 1966-.

901. DAVIDSON, A., Geol. Surv. CAn.:
Granite studies in the Slave Province, District of Mackenzie, 1971-.

902. DINGWELL, D.B., Univ. Toronto, Erindale Campus (Earth and Planetary Sci.):
Physical and chemical properties of silicate melts relevant to igneous petrogenesis.

See:

Viscosity-temperature relationships in the system $Na_2Si_2O_5$-$Na_4Al_2O_5$; Geochim. Cosmochim. Acta, vol. 50, p. 1261-1265, 1986.

Volatile solubilities in silicate melts; Min. Assoc. Can., Short Course in Silicate Melts, Handbook 12, p. 93-129, 1986.

Two primary goals of this program: 1) Making discussions of igneous rock-forming processes (such as melting of rocks within the earth and volcanic eruption of molten rock) fully quantitative; 2) Deriving general theories for the structure and properties of liquid silicates.

The experimental petrology facilities at Erindale are being developed in two phases. The first phase has been completed with the retrofitting of an existing 1 atm tube furnace with equipment for the determination of the variation of melt properties such as viscosity, density and surface tension as a function of oxygen fugacity. A test for the composition-dependence of the partial molar volume of ferric iron (a critical consideration in determining the correct pressure-dependence of melt redox ratios) is currently underway. A programmable viscometer will soon be employed in determining the redox-dependence of melt viscosities in a range of melt compositions.

The second phase is the construction, at Erindale, of a solid-media piston-cylinder apparatus for experimentation with rock-forming systems at high-pressure and temperature. This apparatus will extend the (high-temperature) pressure range available to the Geological Sciences group at Erindale (and St. George) fourfold and considerable interest in the use of this apparatus has been expressed by St. George researchers. Completion of the construction of this apparatus is expected for the start of the summer of 1987 and experiments on the pressure dependence of melt properties will commence shortly thereafter.

903. EMSLIE, R.F., Geol. Surv. Can.:
Geology, petrology and economic potential of the anorthosite suite is southern Labrador, 1975-.

904. EMSLIE, R.F., Geol. Surv. Can.:
Petrology, mineralogy, geochemistry and mineral potential of a Helikian non-orogenic granitic suite in central Labrador and adjacent Quebec, 1979-.

905. GODWIN, C.I., LEITCH, C., Univ. British Columbia (Geological Sciences):
Geology of Bralorne-Pioneer gold vein camp, Bridge River area, southwestern British Columbia, 1984-88; Ph.D. thesis (Leitch).

Fluid inclusions; galena lead isotopes; zircon, K-Ar and Rb-Sr geochronometry; stable isotopes; petrology; alteration.

906. GREENWOOD, H.J., MADER, U., Univ. British Columbia (Geological Sciences):
The origin of the Aley Carbonatite, Lake Williston, British Columbia, 1985-88; Ph.D. thesis (Mader).

MSc on Aley Carbonatite completed. Ph.D. study emphasizing phase equilibria, mode of emplacement, geochemical signature, and chemistry of source. Microprobe anlayses of minerals in conjunction with thermodynamic analysis of phase relations.

907. HILL, J.D., Geol. Surv. Can.:
Granites of the Eastern Meguma Terrane, Nova Scotia, 1985-.

See:

Geology of the Guysborough-Country Harbour area, Nova Scotia; Geol. Surv. Can., Paper 87-1A, p. 415-422, 1987.

908. HOGARTH, D.D., BELL, K., MCCORKELL, R., KATSUBE, T.J., Univ. Ottawa (Geology), Carleton Univ. (Geology), EMR (CANMET), Geol. Surv. Can.:
Carbonatites of Ontario and Quebec, 1976-.

909. KISH, L., Ministère de l'Énergie et des Ressources du Québec:
Pétrochimie des roches mafiques et ultramafiques de la Côte-Nord, Québec, 1986-87.

Le travail vise une connaissance approfondie de la pétrochimie des roches mafiques et ultramafiques de la Côte-Nord, ainsi que de leur potentiel minéral.

910. LAMBERT, M.B., Geol. Surv. Can.:
Archean volcanic studies in the Slave-Bear Province, District of Mackenzie, 1973-.

See:

Archean granite-greenstone boundary relationships in the Beaulieu River volcanic belt, Slave Province, N.W.T.; Geol. Surv. Can., Paper 87-1A, p. 605-618, 1987.

Archean mafic dyke swaran, Beaulieu River volcanic belt, Slave Province, N.W.T.; ibid., p. 673-679, 1987.

911. LAMBERT, M.B., Geol. Surv. Can.:
Archean felsic volcanic complex near Regan Lake, District of Mackenzie, Northwest Territories, 1974-.

912. MACLELLAN, H.E., TAYLOR, R.P., New Brunswick Natural Res., Energy (Mineral Res. Div.):
A petrochemical and metallogenic investigation of granites in the Burnthill Brook area of central New Brunswick, 1985-88.

To study the petrochemical evolution of the "Burnthill granites" and their associated Sn-W mineralization in order to develop exploration criteria for these and similar types of deposits. The age of the granites has been established as Middle Devonian. A "working" geological/exploration model has been developed.

913. MALPAS, J., EDWARDS, S., SUHR, G., Memorial Univ. (Earth Sciences):
Investigation of melt segregations on ophiolite mantle, 1985-88; Ph.D. theses (Edwards, Suhr):

Ongoing study aimed at understanding processes of melt production and transport within oceanic lithosphere. Involves extensive field mapping of ophiolite suites and subsequent laboratory studies including trace element and isotope analyses.

914. MARTIGNOLE, J., NANTEL, S., Université de Montréal (Géologie), Ministère de l'Énergie et des Ressources du Québec:
Petrologie et structure du massif d'anorthosite de Rivière Pentecôte, Québec, 1984-.

Cartographie, pétrographie, géochimie et étude structurale de l'anorthosite de Rivière Pentecôte.

915. MICHAEL, P.J., Univ. British Columbia (Geological Sciences):
The concnetration, behavior and storage of H_2O in the Earth's Mantle.

916. MICHAEL, P.J., Univ. British Columbia (Geological Sciences):
The behavior of rare earth elements in high-silica magmas — a microprobe study.

917. MURPHY, J.B., St. Francis Xavier Univ. (Geology):
Geology of the Antigonish and Cobequid Highlands, Nova Scotia; 1984-89.

918. PEARCE, T.H., CLARK, A.H., Queen's Univ. (Geological Sciences):
Nomarsk imaging of etched surfaces of volcanic rocks: identification of cryptic textures, 1986.

919. PEARCE, T.H., DONNELLY-NOLAN, J., RICE, M.C., Queen's Univ. (Geological Sciences), U.S.G.S., Menlo Park, California:
Laser interference and Nomarski interference imaging of zoning profiles in the Clear Lake volcanics, Northern California, 1987.

920. PEARCE, T.H., PE-PIPER, G., RICE, M.C., Queen's Univ. (Geological Sciences), St. Mary's Univ. (Geology):
Laser interference and Nomarski interference imaging of zoning profiles in volcanics from Lestos, Aegean Sea, 1987.

921. PEARCE, T.H., ST. SEYMOUR, K., RICE, M.C., Queen's Univ. (Geological Sciences), Concordia Univ. (Geology):
Petrology, laser interference and Nomarski interference imaging of Santorini volcanics, Aegean Sea, 1986-87.

See:

Nomarski interference contrast imaging of minute textural details; in organic andesites; GAC-MAC Annual Meeting, Program with abstracts, vol. 12, p. 32, 1987.

922. PEARCE, T.H., SWINAMER, R.I., Queen's Univ. (Geological Sciences):
Geochemistry, petrology and petrogenesis of the Sierra

Chichinautzin region, Mexico; M.Sc. (Swinamer).

See:

Geochemistry and petrology of the Sierra Chichinautzin region, Mexico; GAC-MAC Annual Meeting, Program with Abstracts, vol. 12, p. 93, 1987.

923. PICARD, C., LAMOTHE, D., IREM-MERI, Ministère de l'Énergie et des Ressources du Québec:
Pétrologie des roches magmatiques de la Fosse de l'Ungava, Québec, 1984-89.

Voir:

Pétrologie et volcanologie des roches volcaniques protérozoïques de la partie centrale de la Fosse de l'ungava; Ministère de l'Énergie et des Ressources du Quebec, ET87-07, 1987.

Le travail vise une compréhension approfondie des caracteristiques pétrochimiques et de la genese des filons-couches et laves de la Fosse de l'Ungava (ceinture de Cap-Smith). Ce travail fait partie d'un projet de reconnaissance géologique à long terme qui a débuté en 1983.

924. QUIRT, D., Saskatchewan Research Council:
Diabase dikes in the Athabasca basin, 1984-87.

Rb-Sr age dating analyses have been completed as have petrological/mineralogical and geochemical anlayses. Data analysis is in progress. Element behaviour in the sandstone at the contact with the diabase is the target of recent studies.

925. RUSSELL, J.K., Univ. British Columbia (Geological Sciences):
Vesiculation and crystallization of basalt magmas during transport, 1986.

See:

Crystallization and vesiculation of basalt magmas; Hawaii Symp. How Volcanoes work, Program with Abstracts, p. 215, 1986.

From my previous work, I have demonstrated that the existing thermodynamic data give petrologists an acceptable precision in modelling. The next major advances in igneous petrology will be made by using physical equations of heat transfer and/or fluid flow to constrain the thermodynamic state of the ascending magma.

926. SCHANDL, E.S., WICKS, F.J., Univ. Toronto (Geology), Royal Ontario Mus. (Mineralogy and Geology):
The geochemical development and alteration of basalts from Maud, Meteor and Isles Orcadeas Rises, and a provenance investigation of ice-rafted dropstones in the Weddell Sea, 1987-89.

1. A detailed geochemical study of basalts from Maud Rise, Weddell Sea (Ocean Drilling Program Leg 113), Meteor and Isles Orcadas Rises South Atlantic Ocean (Ocean Drilling Program Leg 114) to determine their relationship to basalts drilled at the Walvis Ridge-Rio Grande Ridge system which was generated during the late Cretaceous. 2. A study of mineralogical and chemical changes of ocean floor basalts during hydrothermal alteration (fluid inclusion, stable isotope study). 3. Provenance investigation of ice-rated dropstones (detailed petrography, XRD, microprobe) to determine the paleoglacial history of the Antarctic continent.

927. SCHAU, M., Geol. Surv. Can.:
Volcanic rocks of the Prince Albert belt, Districts of Franklin and Keewatin, 1972-.

928. TAYLOR, F.C., Geol. Surv. Can.:
Volcanic rocks of Kaminak Lake region, Northwest Territories, 1984-.

929. TROOP, D.G., SMITH, P.M., MARMONT, S., Ontario Geol. Surv.:
Chemical and mineralogical alteration of basaltic rocks associated with Archean Lode gold deposits, 1986-88.

A large scale and detailed examination of basalt chemistry and mineralogy in differing metamorphic and deformational regimes, in an attempt to systematize the alteration of these rocks in gold bearing environments. We propose to present the work at the Gold '88 Conference in Australia.

930. VALIQUETTE, G., DOYON, M., École Polytechnique (Genie minéral):
Synthese des roches ignees du centre nord de la Gaspesie, Quebec, 1985-88; these de maitrise (Doyon).

Voir:

Synthese géologique des roches volcaniques du centre nord de la Gaspesie-Rapport interimaire; MERQ, MB-86-48, 1986.

Le projet vise à caractériser les roches ignées phitoniques et volcaniques dévoniennes du centre nord de la Gaspésie, de part et d'autre des indices minéralisés du dôme de Lemieux. Ces travaux ont conduit à la découverte nouvelle d'empilements de pyroclostites acides et d'une occurrence d'obsidienne d'âge tertiaire.

931. WHALEN, J.B., Geol. Surv. Can.:
Study of Gaspé granites, Québec, 1984-.

See:

K-Ar geochronology of the McGerrigle plutonic complex, Gaspésie Peninsula, Quebec; Geol. Surv. Can., Paper 87-1A, p. 375-380, 1986.

932. WHALEN, J.B., Geol. Surv. Can.:
Study of the New Brunswick batholith belt, New Brunswick, 1985-.

See:

Geology of a northern portion of the Central Plutonic Belt, New Brunswick; Geol. Surv. Can., Paper 87-1A, p. 209-217, 1987.

933. YAOWANOIYOTHIN, WINAI, BARR, S.M., Acadia Univ. (Geology):
Petrogenesis of the Black Brook plutonic suite, northeastern Cape Breton Highlands, Nova Scotia, 1986-88; M.Sc. thesis (Yaowanoiyothin).

The Devonian Black Brook plutonic suite (previously known as the White Point-Black Brook-Warren Brook-Clyburn Brook plutons) has been mapped and sampled in detail. Chemical variation across the intrusion and relations with adjacent gneissic rocks and gneissic xenoliths are being examined.

METAMORPHIC/ROCHES MÉTAMORPHIQUES

934. FRASER, J.A., Geol. Surv. Can.:
Metamorphism in the Canadian Shield, 1974-.

935. FROESE, E., Geol. Surv. Can.:
Metamorphism in the Kisseynew Subprovince, 1980-.

See:

Geology of the New Fox alteration zone, Laurie Lake, Manitoba; Geol. Surv. Can., Paper 86-1B, p. 827-835, 1986.

936. GORDON, T.M., Geol. Surv. Can.:
Metamorphism of volcanic rocks, Crowduck Bay, Manitoba, 1980-.

937. GORDON, T.M., Geol. Surv. Can.: Metamorphic processes in the Kisseynew sedimentary gneiss belt, Manitoba, 1983-.

938. GREENWOOD, H.J., MCMULLIN, D., Univ. British Columbia (Geological Sciences): Geo-thermo-barometry of northern Cariboo Maountains, British Columbia, 1985-88; Ph.D. thesis (McMullin).

Mapping shows that the high temperature isograds have been over-printed by retrograde assemblages. Microprobe analyses and thermodynamic treatment of multiple equilibria give numerous unique P-T coordinates in a relative time frame.

939. HOGARTH, D.D., Univ. Ottawa (Geology): Mineralogy and petrology of metamorphic rocks, Gatineau area, Quebec, 1976-.

Project associated with detailed geological mapping of the Cantley-Perkins area, Quebec.

940. HOGARTH, D.D., DUPUY, H., Univ. Ottawa (Gelogy): Industrial minerals associated with the Wakefield pluton, Wakefield, Quebec, 1986-88; M.Sc. thesis (Dupuy).

941. MARTIGNOLE, J., INDARÈS, A., BRADSHAW, D., Université de Montréal (Géologie): La géotraverse Montréal-Val d'Or. Modélisation tectonique le long d'une coupe à travers la Province de Grenville, Quebec, 1984-90; thèse de doctorat (Indares), thèse de maitrise (Bradshaw).

See:

Some questions about crustal thickening in the central part of the Grenville Province; Geol. Assoc. Can., Sp. Paper 31, p. 327-339, 1986.

Elaboration de modeles tectoniques dans la province de Grenville à partir de données thermobarometriques.

942. MARTIGNOLE, J., MARTIN, E., Université de Montréal (Géologie): Étude du contact occidental du massif d'anorthosite du Lac St-Jean, Quebec, 1987-; these de doctorat (Martin).

Étude des relations structurale et métamorphique entre l'anorthosite du Lac St-Jean et les gneiss encaissants.

943. O'HANLEY, D.S., WICKS, F.J., Royal Ontario Mus. (Mineralogy and Geology), Univ. Toronto (Geology): The development of serpentinization and chrysotile asbestos in the Cassiar Asbestos Mine, British Columbia, 1986-88.

See:

Structural control of serpentine textures in the Cassiar Mining Corporation's open-pit mine of Cassiar, British Columbia; Geol. Assoc. Can. – Mineral. Assoc. Can. Annual Meeting, Program with abstracts, vol. 12, p. 77, 1987.

To establish the interelationship of structural elements and fluid flow and their effect on the development of serpentinization. Knowledge gained has contributed to our understanding of the relationship between lizardite and chrysotile, the controls on serpentine textures and the origin of chrysotile asbestos deposits.

944. SCHANDL, E.S., WICKS, F.J., Univ. Toronto (Geology), Royal Ontario Mus. (Mineralogy and Geology): Alteration of ultramafic rocks in the Kidd Volcanic complex of the Abitibi greenstone belt, Ontario, Canada, 1983-87; Ph.D. thesis (Schandl).

See:

Carbonate alteration of ultramafic rocks in the Timmins area, Ontario; Geol. Assoc. Can. – Mineral. Assoc. Can. Annual Meeting, Program with abstracts, vol. 12, p. 86, 1987.

Mineralogical and chemical changes during metasomatism in the Kidd Creek ultramafic rocks and the Slade-Forbes asbestos deposit, Ontario; ibid., p. 87, 1987.

945. SCHAU, M., Geol. Surv. Can.: Granulites of northern Churchill Province, District of Franklin, 1984-.

946. SKIPPEN, G., GAREAU, S., Carleton Univ. (Geology): Fluids in metamorphic rocks, 1986-88; M.Sc. thesis (Gareau).

See:

Influence of NaCl and KCl on phase relations in metamorphosed carbonate rocks; Am. J. Sci., vol. 286, p. 81-104, 1986.

Studies of rock-water interaction using mineral relationships and microthermometry of fluid inclusions.

947. SMITH, D.G.W., DUKE, J.M., Univ. Alberta (Geology): Behaviour of rare earth elements during sanidinite facies metamorphism, 1985-87; Ph.D. thesis (Duke).

948. SPRAY, J.G., Univ. New Brunswick (Geology): Metamorphism in shear zones, 1977-.

Retrograde and especially prograde metamorphic effects in shear zones are being studied in overthrust terrains. Emphasis is being placed on the energetics of fault movement, particularly with regard to fractional heating effects in brittle and ductile regimes.

949. SPRAY, J.G., Univ. New Brunswick (Geology): Metamorphism of Archaean ultramafic-mafic complexes, 1980-.

Work continues on the description and probable origin of "static" versus "dynamic" styles of metamorphism in Archaean Greenstone sequences in Western Australia and Brazil. A dating program has been started in an attempt to differentiate the two dynamothermal events in time.

950. SPRAY, J.G., FLAGLER, P.A., Univ. New Brunswick (Geology): Petrogenesis of the Fournier Ophiolitic Complex, northeastern New Brunwick, 1986-; M.Sc. thesis (Flagler).

See:

The Fournier Group Mafic Complex, northern New Brunswick; Abstract, Atlantic Geoscience Soc. Workshops and Symp., February 1987, Fredericton, N.B.

The petrogenesis of the Fournier ultramafic-mafic complex is being investigated with particular emphasis on metamorphism of the basic lithologies, establishing its original igneous affinities and placing it within a regional geological context within the Appalachian Orogen.

951. TURNOCK, A.C., MARE, W.P.H., Univ. Manitoba (Geological Sciences): Petrology of alteration zones in the Flin Flon area, Manitoba, 1985-87; M.Sc. thesis (Mare).

See:

Petrology of alteration zones in the Flin Flon area, Manitoba; GAC-MAC Annual Meeting, Program with abstracts, vol. 12, p. 71, 1987.

Some probe data on the chemical composition of chlorites from 4 zones. Chemical anlayses in progress. Write-up deadline June 1987.

952. WICKS, F.J., Royal Ontario Mus. (Mineralogy and Geology):
Mineralogy and geochemistry of the serpentinized ultramafic bodies of the Manitoba nickel belt, 1985-88.

The various serpentinized ultramafic bodies of the Manitoba nickel belt are composed of different mineral assemblages indicating more than one path of alteration. Microprobe analyses of the various minerals species are being used to define the alteration process.

SEDIMENTARY/ROCHES SÉDIMENTAIRES

953. VON BITTER, P.H., ELEY, B.E., STORCK, P.L., Royal Ontario Mus. (Invert. Palaeontology), Univ. Toronto (Geology):
The stratigraphic, petrographic and palynologic characteristics of chert as utilized by Ontario's prehistoric peoples, 1982-.

Implications of the geologial age and occurrence of Fossil Hill Formation chert for Early Palaeo-Indian settlement patterns in southern Ontario (ms. submitted to American Archeological Assoc.).

954. YOUNG, H.R., BRISTOL, C.C., Brandon Univ. (Geology):
Mineralogical and geochemical investigation of the Odanah Shale, southwestern Manitoba, 1982-87.

955. YOUNG, H.R., MOORE, P.R., Brandon Univ. (Geology), New Zealand Geol. Surv.:
Odanah Shale in southwestern Manitoba, 1985-.

956. YOUNG, H.R., ROSENTHAL, L.R., Brandon Univ. (Geology):
Diagenesis of Mississippian carbonates, Daly area, southwestern Manitoba, 1987.

QUATERNARY GEOLOGY/GÉOLOGIE DU QUATERNAIRE

957. ANDERSON, T.W., Geol. Surv. Can.:
Quaternary paleoecology, Great Lakes, 1978-.

958. BAJC, A., Ontario Geol. Surv.:
Quaternary geology of the Fort Frances area, northwestern Ontario, 1986-90.

959. BAKER, C.L., STEELE, K.G., MCCLENAGHAN, M.B., Ontario Geol. Surv.:
Black River-Matheson geoscientific program (BRIM); Reconnaissance till sampling, 1984-89; M.Sc. thesis (McClenaghan).

See:

Sonic drillholes 84-01 to 84-42 and backhoe data sheets; Ontario Geol. Surv., Prel. Maps 80761 to 80796, 1986.

Sonic drillholes 85-01 to 85-60 and backhoe data sheets; Ontario Geol. Surv., Prel. Maps 80838 to 80893, 1986.

An applied program of Quaternary stratigraphy and geochemical studies which are designed to provide a regional mineral exploration – oriented geoscientific data base.

960. BARNETT, P.J., Ontario Geol. Surv., Univ. Waterloo (Earth Sciences):
Quaternary geology and stratigraphy of the Long Point – Port Burwell area, Ontario, 1982-87; Ph.D. thesis.

See:

Transport, sorting, and reworking of Late Wisconsinan plant macrofossils from Lake Erie, Canada; Boreus, vol. 15, p. 323-329, 1986.

961. BARNETT, P.J., Ontario Geol. Surv.:
Quaternary geology of the Elmvale-Barrie areas, Ontario, 1986-..

962. BATTERSON, M.J., Newfoundland Dept. Mines and Energy:
Quaternary mapping and drift exploration in the eastern part of the Central Mineral Belt, Labrador, 1986-89.

This project represents the third year of a five year Federal-Provincial Mineral Development Agreement. Individual projects aim to increae the knowledge of the glacial history of Labrador and concentration is on areas of mineral potential.

963. BLAKE, W., Jr., Geol. Surv. Can.:
Quaternary geochronology, Arctic Islands, 1975-.

See:

New AMS radiocarbon age determinations from east-central Ellesmere Island; applications to glacial geology; Geol. Surv. Can., Paper 86-1B, p. 239-244, 1986.

964. BLASCO, S.M., Geol. Surv. Can.:
Surficial geology and geomorphology, Mackenzie Bay – continental shelf, 1970-.

965. BRAGG, D., Newfoundland Dept. Mines and Energy:
Diatomaceous Earth survey, 1986.

To establish the quantity and quality of Diatomaceous Earth in selected areas of the Avalon Peninsula for possible commercial use.

966. CAMPBELL, J.E., Saskatchewan Research Council (Sedimentary Res.):
Drift prospecting in Saskatchewan 1985-.

See:

Quaternary geology of the Waddy Lake area applied to prospecting for gold; Saskatchewan Research Council, Publ. R-842-1-E-86, 1986.

Quaternary geology and till geochemistry of the sulphide-Hebden Lakes area; Saskatchewan Research Council, Publ. R-842-4-E-87, 1987.

To investigate the Quaternary geology conditions and develop drift prospecting techniques for application in mineral exploration.

967. CLAGUE, J.J., Geol. Surv. Can.: Quaternary geology, upper Fraser River Basin, British Columbia, 1981-.

968. DREDGE, L.A., Geol. Surv. Can.: Quaternary geology, terrain inventory, northeastern Manitoba, 1975-.

969. DREDGE, L.A., Geol. Surv. Can.: Quaternary geology-terrain inventory, northwestern Manitoba, 1980-.

970. DREDGE, L.A., Geol. Surv. Can: Quaternary geology and geomorphology, northern Melville Peninsula, District of Franklin, 1985-.

971. DREIMANIS, A., Ontario Geol. Surv.: Quaternary geology and stratigraphy of the Port Stanley area, Ontario, 1984-88.

See:

Quaternary geology of the Port Stanley area, southern Ontario; Ontario Geol. Surv., Prel. Map P-2827, 1986.

972. DUBOIS, J-M.M., PARENT, M., BAIL, P., Université de Sherbrooke (Géographie): Le Quaternaire des Cantons de l'Est (Québec), 1980-88.

Voir:

Des Cantons de l'Est à l'Estrie; Cahiers de géographie du Québec, vol. 30, no. 80, p. 249-269, 1986.

Le développement des lacs proglaciaires dans les bassins des rivières Coaticook et Moe, sud du Québec; Annales de l'ACFAS, vol. 54, p. 215, 1986.

Varves pré-champlainiennes, région d'Asbestos-Valcourt, Québec; ibid., 1986.

Mise au point sur le Quaternaire des Cantons de l'Est et esquisse paléogéographique.

973. DYKE, A.S., Geol. Surv. Can.: Quaternary geology – terrain inventory, Frances Lake, Yukon Territory, 1981-.

974. DYKE, A.S., Geol. Surv. Can.: Quaternary geology – terrain inventory Prince of Wales Island, King William Island and adjacent mainland Keewatin, 1981-.

975. DYKE, A.S., Geol. Surv. Can.: Quaternary history and surficial materials of northwestern Baffin Island, District of Franklin, 1983-.

976. EDLUND, S.A., Geol. Surv. Can.: Surficial geology – terrain inventory, Bathurst-Cornwallis and eastern Melville Islands, District of Franklin, 1974-.

977. FINAMORE, P.F., Ontario Geol. Surv.: Quaternary geology of the Opapimiskan Lake area, northwestern Ontario, 1984-87.

See:

Quaternary geology of the Mawley Lake-Forester Lake area; Ontario Geol. Surv., Prel. Map P.3045, 1986.

Quaternary geology Donnelly River-Opapimiskan Lake area; Ontario Geol. Surv., Prel. Map P3044, 1986.

978. FINAMORE, P.F., Ontario Geol. Surv.: Quaternary geology of the Shining Tree area, Ontario, 1986-90.

979. FULTON, R.J., Geol. Surv. Can.: Quaternary geology of the Canadian Cordillera, 1975-.

980. FULTON, R.J., Geol. Surv. Can.: Surficial geology, Cobden area (Quebec part), 1980-.

981. GADD, N.R., Geol. Surv. Can.: Correlation of Quaternary geology; Great Lakes – St. Lawrence Valley region, 1978-.

See:

Lithofacies of Leda clay in the Ottawa Basin of the Champlain Sea; Geol. Surv. Can., Paper 85-21, 1986.

982. GEDDES, R.S., Ontario Geol. Surv.: Quaternary geology and applied studies of the Hemlo area, Ontario, 1984-87.

See:

Quaternary geology of the Hemlo area: constraints on mineral exploration; Canadian Geol. J., C.I.M., vol. 1, no. 1, 1986.

Till genesis and glacial dispersion, Page Williams A zone, Hemlo; Ontario Geol. Surv., Misc. Paper 132, p. 182-186, 1986.

983. GRANT, D.R., Geol. Surv. Can.: Surficial geology, St. Anthony – Blanc Sablon map-areas, Newfoundland, 1969-.

984. GRANT, D.R., Geol. Surv. Can.: Surficial geology, Cape Breton Island, Nova Scotia, 1970-.

See:

A late glacial buried organic profile near Brookside, Nova Scotia; Geol. Surv. Can., Paper 86-1B, p. 289-294, 1986.

985. GRANT, D.R., Geol. Surv. CAn.: Surficial geology of Newfoundland, 1974-.

986. GRANT, D.R., Geol. Surv. Can.: Quaternary stratigraphy Yarmouth region, Nova Scotia, 1979-.

987. HICOCK, S.R., Univ. Western Ontario (Geology): Calcareous till and ice streaming north of Lake Superior, 1985-87.

See:

Carbonate till on the Canadian Shield: economic and environmental implications in the Hemlo area, Ontario; Ontario Geol. Surv., Misc. Paper 130, p. 210-217, 1986.

Distally derived, englacially transported, and subglacially deposited calcareous debris north of Superior was controlled by upland obstructions and marginal ice streams along the Laurentide ice sheet.

988. HICOCK, S.R., Univ. Western Ontario (Geology): Lobal affinities and boundaries of tills in southern Ontario trough, shale clast geochemistry, 1987-.

Areal distributions and correlation of tills based on provenance of black shale clasts. Tying in Marcellus, Kettle Point, and Collingwood formations with erosion and transport by Erie, Huron, and Georgian Bay lobes, respectively.

989. HICOCK, S.R., BUTLER, J., Univ. Western Ontario (Geology): Silica sand exploration, southern Ontario, 1987-; M.Sc. thesis (Butler).

Compiling and collecting data on tills and associated sorted drift to determine which lobal areas have greatest potential for silica sand resources. Identifying target areas for exploration of naturally enriched silica deposits by glacial processes.

990. HICOCK, S.R., LAWTON, C., HART, B., Univ. Western Ontario (Geology): Stratigraphy, genesis, and glaciotectonic revisions of drift along north shore of Lake Erie,

Ontario, 1985-; M.Sc. theses (Lawton, Hart).

Lithologic, geochemical, and structural reevaluations of Lake Erie exposures near Bradtville indicate revisions in lithostratigraphic and chronostratigraphic units for the Erie Basin are in order. Dunnich Drift is discontinued: it is Huron-Georgian Bay lobe Catfish Creek Drift of Nissour Stadial Age.

991. HODGSON, D.A., Geol. Surv. Can.:
Surficial geology and geomorphology of central Ellesmere Island, District of Franklin, 1972-.

992. HODGSON, D.A., Geol. Surv. Can.:
Surficial geology, geomorphology and terrain inventory of the Ringnes and adjacent islands, District of Franklin, 1976-.

993. HODGSON, D.A., Geol. Surv. Can.:
Quaternary geology-terrain inventory, northeast Victoria Island and Stefansson Island, District of Franklin, 1986-.

994. HUGHES, O.L., Geol. Surv. Can.:
Quaternary stratigraphy of Old Crow Basin and Porcupine River Valleys, Yukon, 1968-.

995. HUGHES, O.L., Geol. Surv. Can.:
Quaternary geology, Mayo-McQuesten, Yukon Territory, 1979-.

996. JACKSON, L.E., Jr., Geol. Surv. Can.:
Quaternary geology and terrain inventory, Nahanni-Sheldon Lake-Finlayson Lake, Yukon and District of Mackenzie, 1980-.

See:

A composite profile of the Cordilleran ice sheet during McConnell Glaciation, Glenlyon and Tay River map areas, Yukon Territory; Geol. Surv. Can., Paper 86-1B, p. 257-262, 1986.

Bimodel Paleogene volcanics near Tintina Fault east-central Yukon, and their possible relationship to placer gold; Indian Northern Affairs Canada, Yukon Geol., vol. 1, p. 139-147, 1986(1987).

997. KARROW, P.F., Ontario Geol. Surv., Univ. Waterloo (Earth Sciences):
Quaternary geology of the Brampton area, Southern Ontario, 1984-88.

See:

Quaternary geology of the Brampton area, western half; Ontario Geol. Survey, Prel. Map P3072, 1986.

998. KASZYCKI, C.A., Geol. Surv. Can.:
Glacial erosion of the Canadian Shield, 1978-.

999. KELLEY, R.I., Ontario Geol. Surv.:
Synoptic study of Toronto area Quaternary geology, Ontario, 1986-88.

Detailed study of section at former Don Valley Brickworks to be highlighted.

1000. KING, R.H., Univ. Western Ontario (Geography):
Holocene tephrochronology of the south-central Canadian Rockies, 1980-.

See:

Revised ^{14}C age for St. Helens Y tephra at Tonquin Pass, British Columbia; Can. J. Earth Sci., vol. 23, no. 5, p. 734-736, 1986.

Weathering of Holocene volcanic ashes in the southern Canadian Rockies; In: Rates of Chemical Weathering of Rocks and Minerals, S.M. Colman and D.P. Dethier eds., Academic Press, New York, p. 238-264, 1986.

Analysis of primary Holocene air-fall tephras and their alteration products in the south-central Canadian Cordillera continues using a variety of identification criteria, including compositional analyses of glass shards and titanomagnetite inclusions using an electron microprobe, and XRD and selective chemical dissolution analyses.

1001. KLASSEN R.A., Geol. Surv. Can.:
Surficial geology and Quaternary stratigraphy of north Baffin-Bylot Islands, District of Franklin, 1978-.

1002. KLASSEN, R.A., Geol. Surv. Can.:
Drift prospecting, east-central Labrador, 1982-.

See:

Cobble lithologies in eskers of central Labrador; Geol. Surv. Can., Paper 87-1A, p. 43-51, 1987.

Ice flow history and glacial dispersal in the Labrador Trough; ibid., p. 61-71, 1987.

Acoustic survey and glacial history of Adams Lake, outer Nachvak Fiord, northern Labrador; ibid., p. 101-110, 1987.

1003. KLASSEN, R.W., Geol. Surv. Can.:
Quaternary geology, southwestern Saskatchewan, 1983-.

1004. KOR, P., Ontario Geol. Surv.:
Quaternary geological mapping of the Parry Sound (central Ontaio) region, 1986-89.

1005. KRISTJANSSON, F.J., Ontario Geol. Surv.:
Quaternary geology of the Beardmore-Geraldton area, 1986-89.

The application of Quaternary geology to mineral exploration in the Beardmore-Geraldton area has been emphasized.

1006. LAURIOL, B., GRAY, J.T., Univ. Ottawa (Géographie), Univ. Montréal (Géographie):
Géomorphologie quaternaire de l'Ungava, Québec, 1977-88.

See:

The decay and disappearance of the Late Wisconsin Ice Sheet in Ungava; Arctic and Alpine Res., vol. 19, no. 2, 1987.

Le but des travaux est l'étude de la glaciation, de la déglaciation et de l'émersion postglaciaire, ainsi que l'étude des paleoclimats de la péninsule d'Ungava.

1007. MCDONALD, M.M.A., BROOKES, I.A., CHURCHER, C.S., KLEINDIENST, M.R., HOPE, C.A., MILLS, A.J., RITCHIE, J.C., Royal Ontario Museum (Egyptian):
Dakhla Oasis project (subproject-Quaternary geology — Brookes), 1982-.

See:

Quaternary geology and geomorphology, Dakhla Oasis region: second report of investigations (1985-86); J. Soc. Stud. Egypt. Antiquities, vol. 15, no. 3, 1986 and Discussion Paper 32, Dept. Geography York Univ., 1986.

To establish Quaternary geologic-climatic sequence and provide context for archaeological studies.

1008. MUDIE, P.J., Geol. Surv. Can.:
Quantitative Quaternary paleoecology, Eastern Canada, 1982-.

1009. PELLETIER, B.R., Geol. Surv. Can.:
Quaternary paleo-sealevel map of Canada, 1978-.

1010. PRONK, A.G., New Brunswick Natural Res., Energy (Mineral Res. Div.):
Surficial geology – till geochemistry, 1985-89; M.Sc. thesis.

More emphasis has been placed on the use of till geochemistry in gold exploration. A data base for forest research management is still produced and feed back from that side is good. Regional trends in gold values in till will be followed up towards the north in 1987.

1011. PROUDFOOT, D.N.,
Newfoundland Dept. Mines and Energy:
Quaternary mapping and glacial dispersion studies in the Bellburns (12I/5, 6) map area, Newfoundland, 1986-88.

See:

Quaternary geology map of the Bellburns map area (12I/5 and 6); Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

1012. RICHARD, S.H., Geol. Surv. Can.:
Surficial geology, Ottawa Valley lowlands, Ontario-Québec, 1974-.

See:

An ecostratigraphic study of Late Pleistocene sediments of the western Champlain Sea Basin, Ontario and Quebec; Geol. Surv. Can., Paper 85-22, 1986.

1013. RICKETTS, M.J., Newfoundland Dept. Mines and Energy:
1) Wild Cove clay; 2) Silica-rich sand deposits in western Newfoundland, 1986.

See:

Wild Cove clay; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

Silica-rich sand deposits in western Newfoundland; ibid., 1987.

1) Detailed sampling of the Wild Cove clay to determine industrial uses, particularly for manufacture of brick. The deposit has sufficient quantity. XRD and size grain analyses are presently being conducted. 2) Sample sand deposits to determine their geochemical suitability for use in cement production. Seven potential deposits were located.

1014. SADO, E.V., Ontario Geol. Surv.:
Compilation Map (1:100 000 scale), Quaternary geology of northern Ontario, 1986-87.

1015. SCHREINER, B.T., MILLARD, M., MAATHUIS, H., Saskatchewan Research Council (Sedimentary Res.):
Geology and groundwater resources of southern Saskatchewan, 1982-.

See:

Geology and groundwater resources, RM of Walseley in Saskatchewan; Institute of Pedoloyg, Publ. S, 1986.

Geology and groundwater resources, RM of Indian Head in Saskatchewan; Institute of Pedology, Publ. S202, 1986.

Geology and groundwater resources, RM of Chester in Saskatchewan; Institute of Pedology, Publ. S203, 1986.

Define the Quaternary stratigraphy in order to identify aquifers and indicate the groundwater conditions such as water levels and water quality.

1016. SCHREINER, B.T.,
SIMPSON, M.A., Saskatchewan Research Council (Sedimentary Res.):
Surficial geology of Saskatchewan 1:1 000 000 scale map, 1987-89.

1017. SHARPE, D.R., Geol. Surv. Can.:
Quaternary geology, southwestern Victoria Island, District of Franklin, 1983-.

1018. SHARPE, D.R., Geol. Surv. Can.:
Quaternary geology of Lake of the Woods area, Ontario, 1986-.

1019. SHILTS, W.W., Geol. Surv. Can.:
Properties and provenance of glacial sediments, 1969-.

See:

Stratigraphic setting of buried gold-bearing sediments, Beauceville area, Quebec; Geol. Surv. Can., Paper 86-1B, p. 271-278, 1986.

Quaternary stratigraphy of Noire River cores, Beauceville area, Quebec; Geol. Surv. Can., Paper 87-1A, p. 159-164, 1987.

1020. SHILTS, W.W., Geol. Surv. Can.:
Quaternary geology inventory – southern Keewatin, 1973-.

1021. SHILTS, W.W., Geol. Surv. Can.:
Quaternary stratigraphy, Northern Ontario Lowlands, 1983-

1022. SIMPSON, M.A.,
CAMPBELL, J.E., Saskatchewan Research Council (Sedimentary Res.):
Surficial geology (southern Saskatchewan).

Maps: 20, 1:250 000 scale covering Saskatchewan south of 54°N Lat.

1023. SMITH, J., MICHEL, F.A., Carleton Univ. (Geology):
Surficial geology of the Wager Bay – Southampton Island area, District of Keewatin, 1986; M.Sc. thesis (Smith).

Mapping of the surficial geology and geochemical sampling of tills as part of an economic resource evaluation program.

1024. SPARKES, B.G., Newfoundland Dept. Mines and Energy:
Quaternary mapping south coast Newfoundland, 1985-.

See:

Quaternary geology – La Poile (110/9) and La Poile River (110/16) map areas, southwestern Newfoundland; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

Mapping has been completed in the King George IV Lake (12A/4), Peter Snout (11P/13), La Poile (110/9), and La Poile River (110/6) map areas of southwestern Newfoundland. A till sampling program was completed on a 2x2 km spacing. Samples were collected from the C soil horizon from lodgement and meltout till facies. Pebble lithologies were determined and referenced to bedrock map units. These data will be used to aid the determination of transport distances. Grain size analyses, which has not yet been completed, will be used in the interpretation of till geochemistry and to differentiate till types. Landform classification maps have been completed using 1:50 000 scale black and white airphotographs. Ice flow is predominantly southward, although a westward flow was recorded in the northwest corner of the King George IV Lake map area.

1025. STALKER, A.MacS., Geol. Surv. Can.:
Quaternary of southern Alberta, 1965-.

1026. ST-ONGE, D.A., Geol. Surv. Can.:
Surficial geology, north-central District of Mackenzie, 1983-.

See:

Morphosed sedimentary zones in the Bluenose Lake region, District of Mackenzie; Geol. Surv. Can., Paper 87-1A, p. 89-100, 1987.

The late Wisconsinan olistostrome of the lower Coppermine River valley, Northwest Territories; Can. J. Earth Sci., vol. 23, no. 11, p. 1700-1708, 1986.

1027. ST-ONGE, D.A., Geol. Surv. Can.:
Surficial geology inventory – area south of Dolphin and Union Strait, District of Mackenzie, 1984-.

1028. TERASMAE, J., Brock Univ. (Geological Sciences):
Deglaciation chronology and palynostratigraphy of the region between northern Lake Ontario and the Ottawa River valley, Ontario, 1982-.

Palynostratigraphy, radiocarbon dating, geomorphology and stratigraphy of glacial deposits is used to establish a chronological sequence of deglaciation events in southeastern Ontario related to the Great Lakes history.

1029. TERASMAE, J., Brock Univ. (Geological Sciences):
Postglacial history of Copetown Bog, near Hamilton, Ontaio, 1984-87.

Focuses attention on the conservation value of this unique example of undisturbed bog environment in southern Ontario through palynological and geological investigations.

1030. TERASMAE, J., Brock Univ. (Geological Sciences):
Late Wisconsinan chronology of glacial lake phases in the St. Catharines area, Ontario, 1985-87.

Includes palynological and stratigraphic investigations (supported by radiocarbon dating) of Lake Ontario shore bluffs exposures east of St. Catharines, Ontario.

1031. VANDERVEER, D.G., TAYLOR, D., Newfoundland Dept. Mines and Energy:
Quaternary mapping, 1986-87.

See:

Quaternary mapping – glacial dispersal studies, Sops Arm area, Newfoundland; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

Quaternary mapping in the Gander River area, Newfoundland; ibid., 1987.

To provide data on glacial dispersal to assist the mineral exploration industry in their quest for mineral deposits in drift covered areas.

1032. VEILLETTE, J.J., Geol. Surv. Can.:
Géologie du Quaternaire région de l'Outaouais supérieur Québec, 1977-.

1033. VEILLETTE, J.J., Geol. Surv. Can.:
Géologie du Quaternaire et géochimie des tills de la région Mont-Joli/La Rédemption, Québec, 1984-.

1034. VEILLETTE, J.J., Geol. Surv. Can.:
Echantillonnage des sédiments meubles, région de l'Ungava, Québec, 1985-.

1035. VEILLETTE, J.J., Geol. Surv. Can.:
Quaternary geology, Abitibi area, Quebec, 1986-.

See:

Former southwesterly ice flows in the Abitibi-Timiskaming region: implications for the configuration of the late Wisconsinan ice sheet; Can. J. Earth Sci., vol. 23, no. 11, p. 1724-1741, 1986.

1036. VINCENT, J-S., Geol. Surv. Can.
Surficial geology inventory, Banks Island, District of Franklin, 1974-.

1037. VINCENT, J-S., Geol. Surv. Can.:
Surficial geology-terrain inventory, western Victoria Island, District of Franklin, 1981-.

1038. VINCENT, J-S., Geol. Surv. Can.:
Quaternary stratigraphy of the Beaufort coast, Yukon and District of Mackenzie, 1983-.

1039. VINCENT, J-S., Geol. Surv. Can.:
Surficial geology inventory – area of Anderson River map area, District of Mackenzie, 1984-.

1040. VREEKEN, W.J., FRISKE, B.M., MCCULLOCH, T., Queen's Univ. (Geography):
Quaternary soil-landscapes in the southern Canadian prairies, 1981-; M.Sc. theses (Friske, McCulloch).

See:

Quaternary events in the Elkwater Lake area of southeastern Alberta; Can. J. Earth Sci., vol. 23, p. 2024-2038, 1986.

Soil-geomorphic evolution of a Boroll Catena in southwestern Alberta; Soil Science Soc. Amer. J., vol. 50, p. 1520-1526, 1986.

Influence of site topography on paleosol formation in the Highwood River Basin, southern Alberta; Can. J. Soil Sci., vol. 66, p. 673-688, 1986.

The nature and chronological implications of surface tills and post-till sediments in the Cypress Lake area, Saskatchewan; Geol. Surv. Can., Paper 87-1A, p. 111-125, 1987.

This project deals with the chronology of geomorphic events and soil-forming intervals, as well as soil-landscape relationships, between the Alberta Foothills and Pioneer, Saskatchewan. New work will entail postglacial eolian landscapes near Lethbridge and preglacial landscapes of the Saskatchewan Cypress Hills.

1041. AMOS, C.L., Geol. Surv. Can.:
Landsat calibration for suspended sediment concentration in marine coastal environments, 1978-.

1042. BÉLANGER, J.R., Geol. Surv. Can.:
Remote sensing applied to Quaternary geology and mineral tracing, 1978-.

1043. BONN, F., GWYN, Q.H.J., DUBOIS, J.-M.M., Université de Sherbrooke (Géographie):
Télédétection des dépôts meubles: île d'Anticosti et Cantons de l'Est, 1982-87.

Voir:

La cartographie des dépôts meubles à l'ère des satellites; Arpenteur-géomètre, vol. 13, no. 3, p. 52-54, 1986.

1044. BUTEAU, P., SEUTHÉ, C., Ministère de l'Énergie et des Ressources du Québec:
Tourbières de Tête-à-la-Baleine: Télédétection, 1986.

Classification des dépôts de tourbe de Tête-à-la-Baleine à partir de l'exploitation d'une image MSS accentuée en fonction de la végétation.

1045. DUBOIS, J-M.M., Université de Sherbrooke (Géographie):
Étude de la dynamique de l'estuaire et du golfe du Saint-Laurent par télédétection, 1982-88.

Détermination de la dynamique multitemporelle des courants marins par imagerie H.C.M.M., NOAA-7, TM et MSS.

1046. DUBOIS, J-M.M., BONN, F., LAFRANCE, P., Université de Sherbrooke (Géographie):
Télédétection des terres humides, 1984-87.

Voir:

La télédétection par satellites pour l'inventaire des milieux humides; 54e Congrès de l'ACFAS, Montréal, 1986.

1047. DUBOIS, J-M.M., LAVOIE, A., Université de Sherbrooke (Géographie):
Télédétection des algues marines des côtes du Québec, 1983-87.

Voir:

La télédétection des macrophytes marins au Québec; Annales de l'ACFAS, vol. 54, p. 480, 1986.

Etablir des méthodes opérationnelles pour déterminer l'extension et la biomasse des bancs d'algues marines intertidales et infralittorales.

1048. MELLINGER, M., Saskatchewan Research Council (Data Analysis Group):
Image analysis applied to the intergrated interpretation of mineral exploration data, 1985-.

To develop and apply methodology for the integrated interpretation of geological, geophysical, geochemical and other mineral exploration data, using image analysis (remote sensing) hardware-software systems.

1049. RENCZ, A.N., Geol. Surv. Can.:
Geological evaluation and remote sensing (GEARS), 1984-.

1050. ROYER, A., Centre d'applications et de recherches en télédétection (CARTEL): Université de Sherbrooke.
Étude de l'atmosphère par télédétection satellite. Application aux études environnementales et climatiques, 1983-89.

Voir:

Évaluation du potentiel de la télédétection spatiale pour l'étude du milieu urbain: le cas de Montréal; *Revue canadienne de Génie Civil*, 1986.

Modélisation du rayonnement solaire réfléchi par la terre et l'atmosphère entre 0.4 et 4 micons. Analyses quantitative des paramètres physiques du sol à partir des images numériques des satellites d'observation de la terre (Landsat, SPOT, NOAA). Étude des variations spatio-temporelles de l'utilisation du sol dans la vallée du Saint-Laurent.

1051. SLANEY, V.R., Geol. Surv. Can.:
Remote sensing applications, 1981-

1052. TANGUAY, M.G., GAGNIER, B.M.., École Polytechnique (Génie minéral):
Applications des images Landsat et des images SAR en génie et en géologie, 1982-87; thèse de maitrise (Gagnier).

Développer les méthodes d'utilisation et d'application des images Landsat et de radar SAR aux divers domaines en génie et en géologie.

1053. TANGUAY, M.G., SEA, B., CARBONI, S., École Polytechnique (Génie minéral):
Analyse des linéaments d'Anticosti, Québec, 1983-87.

Déterminer les structures favorables à la recherche des hydrocarbures par analyses des linéaments sur photos aériennes et corrélation avec les images Landsat.

1054. TAPPER, G.O., BECKETT, P.J., COURTIN, G.M., BESWICK, A.E., MCDONALD, K., Laurentian Univ. (Geography/Biology/Geology):
Remote sensing and geobotany as an aid to mineral exploration in northern terrains, 1985-.

See:

Spectral reflectance of vegetation applied to geobotanical remote sensing; Proc. ERIM Ann Arbour, Michigan, 1986.

Shift in spectral response of nickel-loaded and control shoots of White Birch (**Betula papyrifera** Marsh.); ibid.

1055. TYRIE, A., Univ. Toronto, Erindale College (Survey Science):
Remote sensing techniques applied to the east African rift system 1984-.

See:

Potential application of remote sensing methods to the African rift system; J. Geodynamics, Sp. Issue, 1986.

Proceedings of the Second International Symposium on Recent Crustal Movements in Africa; ibid., 1986.

This work is the initial stage of mineral and oil mapping in Africa. Subsequent work to integrate with geophysical studies currently underway for northern Africa.

1056. WANKIEWICZ, A., Environment Canada (National Hydrology Res. Instit.):
River basin moisture measurement.

See:

Managing snow to extend the areal range of winter wheat production; Proc. 54th Annual Meeting, Western Snow Conf., p. 30-40, 1986.

Runoff calibration between small Prairie watersheds; CSAE Paper No. 86-307, Ann. Meeting, Can. Soc. Agricultural Engineers, 1986.

All-weather sensing of hydrological targets is being investigated using Nimbus-7 passive microwave radiometry. A mathematical model of microwave emission from natural snowpacks has been developed to assess the effects of snow water equivalent, soil temperature and grain size. Satellite and field observations are being compared for the heavy-lacustrine clay zone in southern Manitoba. The effects of soil temperature, snow cover and spring flooding is observed in the microwave data.

ANCIENT SEDIMENTS/ SÉDIMENTS ANCIENS

1057. BANERJEE, I., Geol. Surv. Can.:
Stratigraphy and sedimentology of the Mannville Group, southern Alberta, 1982-.

See:

Lower Mannville sedimentation in the "Edmonton Channel", central Alberta; Geol. Surv. Can., Paper 86-1B, p. 383-397, 1986.

Interpretation of dipmeter logs of the Lower Cretaceous Cutbank Sandstone, Mannville Group, southern Alberta; Geol. Surv. Can., Paper 87-1A, p. 337-348, 1987.

1058. BERNSTEIN, L., HOFMANN, H.J., Université de Montréal (Géologie):
Biosedimentary structures of the Beekmantown Group carbonates, Quebec, 1985-88; Ph.D. thesis (Bernstein).

An analysis of the sedimentology of the Beekmantown Group. Emphasis is being placed on its diverse assemblage of biosedimentary structures, including both stromatolites and trace fossils. Image analysis of the stromatolites is also being pursued.

1059. BLAIS, N., ROCHELEAU, M., BOURQUE, P.A., Université Laval (Géologie):
Sédimentologie de la Formation de Gascons, région de Port-Daniel-Gascons, Silurien de Gaspésie, Québec, 1986-88; thèse de M.Sc. (Blais).

Voir:

Synthèse stratigraphique et paléogéographique du bassin silurien de Gaspésie-Matapédia-Témiscouata; Ministère de l'Énergie et des Ressources du Québec MB 86-72, 1986.

1060. BRISSON, H., ROCHELEAU, M., ST-JULIEN, P., Université Laval (Géologie):
Stratigraphie et sédimentologie de la Formation de Chebistuan, région du lac La Trève, Abitibi, Québec, 1983-87; thèse de M.Sc. (Brisson).

1061. CHANDLER, F.W., Geol. Surv. Can.:
Redbed sequences in Canada, 1976-.

1062. CHEEL, R.J., LECKIE, D.A., Brock Univ. (Geological Sciences), Geol. Surv. Can.:
Sedimentology of tidal inlet deposits of the Milk River Formation, southern Alberta, 1985-87.

See:

Tidal channel facies of the Virgelle Member (Cretaceous Milk River Formation), southern Alberta; Geol. Surv. Can., Paper 86-1B, p. 637-645, 1986.

1063. CHEEL, R.J., LECKIE, D.A., Brock Univ. (Geological Sciences), Geol. Surv. Can.:
Sedimentology of the Cypress Hills Formation (Oligocene) of southern Alberta and southern Saskatchewan, 1987-.

An outcrop study of conglomerates and sandstones of the Cypress Hills Formation.

1064. COLLINS, D.J., MIDDLETON, G.V., McMaster Univ. (Geology):
Sedimentology of the Lower Devonian Oriskany Sandstone of the central Appalachians, 1983-87; Ph.D. thesis (Collins).

See:

Sediment processes and depositional environments of the Lower Devonian Oriskany Sandstone; Northeastern Section, Geol. Surv. Amer., Abstracts with Programs, vol. 18, no. 1, p. 9, 1986.

Ph.D. thesis is currently being written and should be completed in the fall of 1987.

1065. COOK, D.G., Geol. Surv. Can.:
Comparative studies of structural prototypes and/or sedimentary environments, 1970-.

1066. CURRIE, K.L., Geol. Surv. Can.:
Stratigraphy and sedimentology of Silurian rocks of Gaspe, 1984-.

1067. DESROCHERS, A., Université d'Ottawa (Géologie):
Evolution de plates-formes calcaires (Trias Superieur) sur un terrain déplacé ou "suspect terrane": Wrangellia, ouest de la Cordillère, 1986-88.

Les objectifs spécifiques de ce projet sont: 1) établir un cadre stratigraphique détaillé des calcaires du Trias Supérieur à l'intérieur du terrain de Wrangellia, 2) élaborer un modèle de plate-forme calcaire, en plus de distinguer les étapes d'édification de la palte-forme, et 3) étudier la pétrogénèse des roches calcaires.

1068. FOGARASSY, T., BARNES, W.C., Univ. British Columbia (Geological Sciences):
Sedimentologic studies in Jurassic and Early Cretaceous strata, Queen Charlotte Islands, British Columbia, 1987-89; M.Sc. thesis (Fogarassy).

1069. FOLEY, S.L., NOBLE, J.P.A., Univ. New Brunswick (Geology):
Stoney Creek oil and gas field project, New Brunswick, 1986-.

Stoney Creek oil and gas field was discovered in 1909 and is presently the only producing oil and gas field in eastern Canada. An evaluation of oil well cuttings and existing well data, as well as a limited bedrock study will ultimately lead to a sedimentary facies model. Such a model will aid in further exploration at Stoney Creek and the associated areas in the Moncton Subbasin.

1070. FOSCOLOS, A.E., Geol. Surv. Can.:
Mass transfer to elements in clastic sequences, 1985-.

1071. GRAF, G.C., DIXON, O.A., Univ. Ottawa (Geology):
Carbonate buildups of the Upper Silurian Barlow Inlet Formation, Devon Island, Arctic Canada, 1984-87; M.Sc. thesis (Graf).

1072. HAIDL, F., Saskatchewan Geol. Surv.:
Geology of the Silurian Interlake Group, Saskatchewan, 1986-.

1073. HAMMACK, J., BARNES, W.C., ROSS, J.V., Univ. British Columbia (Geological Sciences):
Structural history and porosity development in Carboniferous strata at Overfold Mountain, British Columbia.

1074. JACKSON, V.A., BELL, R.M., HOWSON, S.H., KERR, D.E., Indian Affairs and Northern Development (NAP) Canada:
Russell Lake 85J/13 850/3,4, NWT, 1986-.

See:

Geology of the north end of Russell Lake, NWT; DIAND, EGS 1986-11.

Mapping supracrustals that host iron formation gold deposits.

1075. KREIS, K., Saskatchewan Geol. Surv.:
Development of a depositional model for the oil-prone Jurassic section in the Wapella-Moosomin area, Southeastern Saskatchewan, 1986-; M.Sc. thesis.

1076. LECKIE, D.A., Geol. Surv. Can.:
Sedimentology, of Cretaceous clastics in the western Canada basin, 1986-.

See:

Paleosols and Late Albian sea level fluctuations: preliminary observations from the northeastern British Columbia foothills; Geol. Surv. Can., Paper 86-1B, p. 429-441, 1986.

Tide channel facies of the Virgelle Member (Cretaceous Milk River Formation), southern Alberta; ibid., p. 637-645, 1986.

Cretaceous depositional facies in the western interior: the southern Alberta transect; Can. Soc. Petrol. Geol. Summer Field Trip, 1986.

1077. MARTINI, I.P., Univ. Guelph (Land Resource Sciences):
Comparative sedimentological analysis of Quaternary cold basins of Canada and Lower Permian basins of Gondwanaland, 1983-93.

See:

Cold-climate, Permian, fluvial-paralic coal-forming environments: Collinsville Coal Measures, Bowen Basin, Australia; Internat. J. Coal Geol., 1987.

We are living in a cool interglacial period. Sedimentological models we can construct by analyzing recent cold coasts and rivers, particularly those of the subarctic and cold-temperate conditions, can be used to interprete post-glacial rock sequences of the Lower Permian of Australia and Brasil, and possibly those of South Africa. To date the comparison has been conducted in Australia (Bowen Basin, Sydney Basin and the Tasmanian Basin).

1078. MARTINI, I.P., GRINHAM, D., KING, A., CLARKE, K., KELLY, R., Univ. Guelph (Land Resource Sciences):
Sedimentology of cold climate (non-glacial) coastal and fluvial environments, 1981-91; M.Sc. theses (Grinham, King, Clarke, Kelly).

See:

Regional distribution of **Macoma balthica** and **Hydrobia minuta** on the subarctic coasts of Hudson and James Bays, Ontario, Canada; Estuarine, Coastal and Shelf science, vol. 24, p. 47-68, 1987.

Pleistocene glacio-lacustrine deltaic deposits of the Scarborough Formation, Ontario, Canada; Sedimentary Geology, vol. 47, p. 27-52, 1986.

Canada is ideally suited for study of the sedimentology of cold climate deposits along the subarctic and arctic coasts of James Bay, Hudson Bay, and Foxe Basin (the remnant intracratonic basins of North America) and in the early post-glacial deposits of Ontario and other provinces. The study has now progressed to the extent that the subarctic coasts of southernmost James Bay and Hudson Bay have been studied, and selected Pleistocene sections analyzed.

1079. MIALL, A.D., Univ. Toronto (Geology):
Facies architecture of selected Jurassic-Cretaceous fluvial units, Colorado Plateau, 1985-.

To describe the architectural elements (3-D components) of each fluvial system in order to improve our understanding of fluvial processes.

1080. MUIR, I.D., DIXON, O.A., Univ. Ottawa (Geology):
Facies analysis of the Middle Devonian Ramparts reef complex, Mackenzie Mountains, N.W.T., 1982-87; Ph.D. thesis (Muir).

1081. NOBLE, J.P.A., Univ. New Brunswick (Geology):
Tecto-sedimentary evolution of Siluro-Devonian basins in the northern Appalachians, 1980-.

1082. NOBLE, J.P.A., CHOWDHURY, A., ST. PETER, C., Univ. New Brunswick (Geology):
Diagenesis of the Albert Formation, in the Carboniferous Moncton Basin, New Brunswick, 1985-; M.Sc. theses (Chowdhury, St. Peter).

1083. PICKERILL, R.K., HARLAND, T.L., Univ. New Brunswick (Geology); Poroperm Geochem Ltd., England:
The Trenton Group (Middle Ordovician) of Quebec, 1981-.

See:

Establishment and development of patch reefs in the intracratonic Ordovician sequence near Chicoutimi, Quebec, eastern Canada; Lethaia, vol. 20, p. 198-208, 1987.

Fieldwork in 1987 will concentrate on the Trenton Group in the Lac-St. Jean and Chicoutimi areas. Hardgrounds and lithostratigraphy will be analyzed in detail.

1084. PICKERILL R.K., HURST, J.M., TANSATHIEN, W., Univ. New Brunswick (Geology), British Petroleum, London England:
Siluro-Devonian of the Arisaig Group, Nova Scotia, 1984-; M.Sc. thesis (Tansathien).

See:

The relationship between facies and faunal associations in the Llandovery Ross Brook Formation, Arisaig, Nova Scotia; Can. J. Earth Sci., vol. 23, p. 705-726, 1986.

Fieldwork in 1987 will be directed towards strata of Ludlow age.

1085. PLINT, A.G., Univ. Western Ontario (Geology):
Regional sedimentology of the Cardium Formation, northwestern Alberta. Regional sedimentology of Dunvegan Formation, northeastern British Columbia, 1984-.

See:

Cardium Formation 6: Stratigraphic framework of the Cardium in subsurface; Bull. Can. Petrol. Geol., vol. 34, no. 2, p. 213-225, 1986.

Cardium Formation 8: Facies and environments of the Cardium shoreline and coastal plain in the Kakwa Field and adjacent areas, northwestern Alberta; Bull. Can. Petrol. Geol., vol. 35, no. 1, p. 48-64, 1987.

1086. PLINT, A.G., D'ORSAY, A.M., Univ. Western Ontario (Geology):
Sedimentology of the Pictou Group in the Pictou Basin, Nova Scotia, 1985-88; Ph.D. thesis (D'Orsay).

1087. PLINT, A.G., NORRIS, B., Univ. Western Ontario (Geology):
Regional sedimentology of the Muskiki and Bad Heart formations, Alberta and British Columbia, 1986-88; M.Sc. thesis (Norris).

See:

Morphology and origin of an erosion surface cut into the Bad Heart Formation during major sea-level change, Santonian of west-central Alberta, Canada; J. Sedimentary Petrol., vol. 57, 1987.

1088. POEY, J.-L., DIXON, O.A., Univ. Ottawa (Geology):
Carbonate facies of the Silurian shelf-to-basin transition, Baumann Fiord area, Ellesmere Island, District of Franklin, 1981-87; M.Sc. thesis (Poey).

1089. RICE, R.J., Ontario Geol. Surv.:
Regional sedimentology of the Lorrain Formation (Aphebian) in the Cobalt Embayment of central Ontario, 1986-89.

1090. RICE, R.J., MIDDLETON, G.V., McMaster Univ. (Geology):
Sedimentology and petrology of the Okse Bay Group (Middle and Upper Devonian), southwestern Ellesmere Island, Arctic Archipelago, 1983-87; Ph.D. thesis (Rice).

1091. ROSENTHAL, L.R., Brandon Univ. (Geology):
The sedimentology and stratigraphy of the Jura-Cretaceous clastic wedge, west-central Alberta, 1985-; Ph.D. thesis.

1092. VON BITTER, P.H., Royal Ontario Mus. (Invert. Palaeontology), Univ. Toronto (Geology):
Calcite pseudomorphs from the Pleistocene and Holocene of Canada: possible geothermometers, 1976-.

1093. WALKER, R.G., BARTLETT, J.J., McMaster Univ. (Geology):
Nature of "Event Surfaces" or "Pause Planes" in the Cardium Formation, Alberta, 1984-87; M.Sc. thesis (Bartlett).

1094. WALKER, R.G., BARTLETT, J.J., McMaster Univ. (Geology):
Viking depositional environments in northeastern subcrop area, 1987-; Ph.D. thesis (Bartlett).

1095. WALKER, R.G., BERGMAN, K.M., McMaster Univ. (Geology):
Deposition of Cardium Formation conglomerates at Carrot Creek, Alberta, 1984-87; Ph.D. thesis (Bergman).

See:

The importance of sea level fluctuations in the formation of linear conglomerate bodies: Carrot Creek Member, Alberta; J. Sed. Petrol., vol. 57, 1987.

Cardium Formation conglomerates at Carrot Creek field-offshore linear ridges or shorface deposits; SEPM Core Workshop 9, p. 217-268, 1986.

1096. WALKER, R.G., BHATTACHARAYA, J., McMaster Univ. (Geology):
Depositional environments of Dunvegan Formation in subsurface, Alberta, 1984-88; Ph.D. thesis (Bhattacharaya).

1097. WALKER, R.G., LEGGITT, S.M., McMaster Univ. (Geology):
Geometry and erosion sufaces, Raven River Member, Cardium Formation, northern Pembina Field, Alberta, 1985-87; M.Sc. thesis (Leggitt).

1098. WALKER, R.G., MCLEAN, D.J., McMaster Univ. (Geology):
Sedimentology, depositional environments and erosion surfaces, Cardium Formation, Ferrier and Willesden Green areas, Alberta, 1985-87; M.Sc. thesis (McLean).

1099. WALKER, R.G., PATTISON, S.A.J., McMaster Univ. (Geology):
Cardium erosion surfaces and depositional environments, Burnstick ("B Sand") Member, Caroline, Carrington and Crossfield areas, Alberta, 1985-87; M.Sc. thesis (Pattison).

1100. WALKER, R.G., PATTISON, S.A.J., McMaster Univ. (Geology):
Depositional environments and processes, conglomerates of Viking Field at Crystal, Aberta, 1987-; Ph.D. thesis (Pattison).

1101. WALKER, R.G., PLINT, A.G., McMaster Univ. (Geology), Univ. Western Ontario (Geology):
Regional stratigraphy and development of erosion surfaces within Cardium Formation, Alberta, 1985-.

See:

Cardium Formation 6. Stratigraphic framework of the Cardium in subsurface; Bull. Can. Petrol. Geol., vol. 34, no. 2, p. 213-225, 1986.

1102. WALKER, R.G., POWER, B.A., McMaster Univ. (Geology):
Depositional environment of Viking sand body at Joarcam, Alberta, 1985-87; M.Sc. thesis (Power).

1103. WALKER, R.G., POWER, B.A., McMaster Univ. (Geology):
Sedimentology of Dunvegan Formation between Simonette Field and the Peace River, 1987-; Ph.D. thesis (Power).

1104. YOLE, R.W., Carleton Univ. (Geology):
Stratigraphy, petrography and environmental analysis of clastic Mesozoic-Tertiary successions, Mackenzie Delta – Beaufort Shelf area, N.W.T., 1987-.

Continuation of earlier studies, mainly on Parsons Formation and Reindeer Formation.

1105. YOLE, R.W., BROWN, D.M., WELSFORD, B., Carleton Univ. (Geology):
Petrography, stratigraphy and diagenesis of Mesozoic clastic sequences, offshore Eastern Canada, 1976-88.

Continuation of earlier studies based on Missisauga Formation, Scotian Shelf and Grand Banks.

RECENT AND UNCONSOLIDATED SEDIMENTS/SÉDIMENTS RÉCENTS ET NON CONSOLIDÉS

1106. ADSHEAD, J.D., Geol. Surv. Can.:
Geological characterization of Arctic lakes: sediment properties and sedimentary processes, 1977-.

1107. AMOS, C.L., Geol. Surv. Can.:
Sediment dynamics at the head of the Bay of Fundy, 1978-.

1108. AMOS, C.L., Geol. Surv. Can.:
Stability and transport of sediments on Continental shelves, 1980-.

1109. BORNHOLD, B.D., Geol. Surv. Can.:
Marine surficial geology and sedimentation, British Columbia, 1975-.

See:

Geochemistry of northern Juan de Fuca Ridge sediments, northeast Pacific; Geol. Surv. Can., Paper 87-1A, p. 127-142, 1987.

1110. CAMPBELL, J.E., HENDRY, H.H., Saskatchewan Research Council, Univ. Saskatchewan (Geological Sciences):
Stratigraphy and sedimentology of a meander lobe in a gravel-bed stream, Saskatchewan River, Nipawin, Saskatchewan, 1984-.

1111. CANT, D.J., Geol. Surv. Can.:
Sedimentology of east coast formations, 1985-.

1112. CHEEL, R.J., Brock Univ. (Geological Sciences):
A study of the textural characteristics of stratification in clastic deposits, 1984-.

See:

Horizontal lamination formed under upper flow regime plane bed conditions; J. Geol., vol. 94, p. 489-504, 1986.

Measurement of small-scale textural laminae in sand-sized sediments; J. Sed. Pet., vol. 56, p. 547-548, 1986.

Examines grading and fabric in wave- and current-formed stratification.

1113. **DALRYMPLE, R.W., HOOGENDOORN, E.L.**, Queen's Univ. (Geological Sciences): Sedimentology and dynamics of shoreface attached sand ridges, Sable Island Bank, Nova Scotia, 1982-87; Ph.D. thesis (Hoogendoorn).

See:

Morphology, lateral migration and internal structures of shoreface connected ridges, Sable Island Bank, Nova Scotia, Canada; Geology, vol. 14, p. 400-403, 1986.

Internal structures of shoreface — connected ridges, Sable Island Bank; Abstracts, SEPM Ann. Midyear Meeting, vol. III, p. 53, 1986.

Examines the internal large and small scale structures and the external characteristics of shoreface connected ridges. The goal of the study is to develop a process based local facies model for ridges on storm dominated, tidally influenced continental shelves.

1114. **DALRYMPLE, R.W., LEGRESLEY, E.M.**, Queen's Univ. (Geological Sciences): Holocene sedimentation on the Western Grand Banks of Newfoundland, 1985-87; M.Sc. thesis (Legresley).

The Western Grand Banks consist of tabular banks separated by glacially-incised channels. The glacially-deposited sands, silts and gravels have been reworked during the Holocene transgression to form a suite of depth-stratified lithologies, with abundant large-scale, current generated bedforms at depths up to 140 m — to generate a model of sedimentation in this area by examining sediment textures, the distribution and orientation of bedforms, the stratigraphic relationships and the physical oceanography.

1115. **DALRYMPLE, R.W., OTTO, J.E., FLINT, J.J.**, Queen's Univ. (Geological Sciences), U.S. Army Corp Engineers, Buffalo, Brock Univ. (Geological Sciences): Sedimentology of the Sixteen Mile Creek lagoon, Niagara Peninsula, Ontario, 1980-87; M.Sc. thesis (Otto).

The study documented the nature and stratigraphy of the sediments filling this Lake Ontario lagoon. They are predominantly clayey and organic rich, and reflect progressive transgression of the lagoon as lake levels rose throughout the last 3300 years. Stream capture, human influence and climatically controlled lake-level fluctuations are also recorded.

1116. **DALRYMPLE, R.W., ZAITLIN, B.A.**, Queen's Univ. (Geological Sciences), Univ. Sydney (Coastal Studies Unit): Facies distribution in the macrotidal, Cobequid Bay — Salmon River estuary, Nova Scotia, 1983-87; Ph.D. thesis (Zaitlin).

See:

Diagnostic criteria of high-energy macrotidal estuaries; Abstracts, Int'l. Assoc. Sedimentologists, 12th Congress, p. 345, 1986.

A model of morphological zonation in macrotidal estuaries; Abstracts, Soc. Econ. Paleont. and Mineral., 3rd Ann. Midyear Meeting, p. 119, 1986.

To document the facies and their distribution throughout the entire length of this estuarine complex (from the tidal limit seawards), and to determine the general processes responsible for this distribution. In the process, we have developed a conceptual model of estuarine sedimentation which may be applicable to all estuaries.

1117. **FORBES, D.L.**, Geol. Surv. Can.: Beaufort Sea coast, 1983-.

1118. **GREENWOOD, B., WILKERSON, S.**, Univ. Toronto (Geography, Geology): Bedforms, flow regime and bedding genesis in the nearshore zone: recent and ancient, 1982-88; M.Sc. thesis (Wilkerson).

See:

Hummocky cross-stratification in the surf zone; Sedimentology, vol. 33, p. 33-45, 1986.

1119. **JANSA, L.F.**, Geol. Surv. Can.: Stratigraphy and sedimentology of the Mesozoic and Tertiary rocks of the Atlantic continental margin, 1971-.

1120. **JONES, J.R., CAMERON, B.**, Acadia Univ. (Geology): Chronostratigraphic framework for C-14 dates, pollen and core samples at Plum Island, Massachusetts, USA, 1986-88.

See:

A chronostratigraphic framework for the pollen and core stratigraphy at Plum Island, Massachusetts; Abstracts with Program, Geol. Soc. Amer., vol. 19, no. 1, p. 22, 1987.

Based on C-14 dating and stratigraphic control, pollen identified within the marsh sequences behind Plum Island, Massachusetts, include nearly 5,000 years B.P. of floristic history. Analysis of C-14 dates and pollen from recently discovered freshwater lake deposits on the oceanward side of the island indicates good intraregional correlation with floristic zones for southern New England. Preliminary interpretation of this data suggests a paleoenvironment consisting of a series of small freshwater lakes in the present day area of Plum Island some 3,000 to 5,000 years B.P. The stratigraphy of the lake deposits includes a basal till, lake bottom beds consisting of silty clay, freshwater peats, rafted cedar logs, and salt marsh peat. The spatial and temporal relationship of the deposits to the geomorphic history of the island suggest that the island migrated southward in response to a slowly rising sea level. The freshwater deposits were either embayed by sea level rise or encroached upon by a series of accreting spits sometime after 3,000 years B.P.

1121. **KING, R.H., YOUNG, R.B.**, Univ. Western Ontario (Geography): Paleolimnology of Truelove Lowland, Devon Island, N.W.T., 1985-87; M.Sc. thesis (Young).

See:

Retrieval of cores for diatom and geochemical analyses from five High Arctic lakes, Truelove Lowland, Devon Island, NWT; Abstracts Association of Canadian Universities for Northern Studies, National Student Conference on Northern Studies, Conference Centre, Ottawa, November 18-19, p. 113, 1986.

As a result of the postglacial coastal emergence of Truelove Lowland a number of marine lagoons were isolated from the sea by a series of raised beaches. Today, these lakes, now freshwater, cover approximately 22% of the Lowland. During the 1986 field season sediment cores were obtained from five of the largest and deepest lakes using a modified Livingstone corer. Based on the vertical distribution of chemical elements in conjunction with the diatom assemblage in the sediments, an attempt is being made to describe the Holocene paleoenvironmental history of the Lowland.

1122. LUTERNAUER, J.L., Geol. Surv. Can.:
Fraser Delta sedimentation, British Columbia, 1974-.

1123. LUTERNAUER, J.L., Geol. Surv. Can.:
Marine delta sedimentation, British Columbia, 1979-.

See:

Structure and stratigraphy of the southwestern Fraser River delta: a trial shallow seismic profiling and coring survey Geol. Surv. Can., Paper 86-1B, p. 707-714, 1986.

Large-scale sedimentary processes in a trained, high-energy, sand-rich estuary: Fraser River delta, British Columbia; Geol. Surv. Can., Paper 87-1A, p. 727-734, 1987.

Preliminary fieldwork for thermoluminescence dating studies at the Fraser River delta, British Columbia; ibid., p. 901-904, 1987.

First documented large failure at the Fraser River delta front, British Columbia; ibid., p. 919-924, 1987.

1124. MACLEAN, B., Geol. Surv. Can.:
Near-surface geology of the Arctic Island channels, 1982-.

1125. MIDDLETON, G.V., TAYLOR, I., McMaster Univ. (Geology):
Alluvial fan sediments; Ph.D. thesis (Taylor).

A program has begun to re-examine the sedimentology of selected modern and ancient alluvial fan deposits. Taylor is completing a doctorate on the Keweenawan sediments of the Lake Superior region.

1126. MIDDLETON, G.V., ZHANG, S., McMaster Univ. (Geology):
Hydrodynamics and sedimentary processes of small tidal inlets, Prince Edward Island, 1985-88; Ph.D. thesis (Zhang).

Investigation of hydraulics and sediment movement in a small tidal inlet. Three field seasons have been carried out. Tidal elevation and currents were monitored at different locations and time-period in the system. Suspension loads were sampled.

1127. MUDIE, P.J., Geol. Surv. Can.:
Ice Island sampling and investigation of sediments (ISIS), 1984-.

1128. RENAUT, R.W., Univ. Saskatchewan (Geological Sciences):
Sedimentology and palaeoenvironmental significance of the travertine deposits of the Western Cordillera, 1984-.

A systematic study of the sedimentology, petrography and chemistry of the travertine deposits of Alberta and British Columbia to study their genesis, especially roles of microorganisms, and to ascertain what useful palaeoenvironmental information can be gained. Study will include extensive microprobe, SEM and stable isotope analyses. Preliminary work commenced in 1984 on deposits near Clinton, British Columbia. Work now continuing on the Miette hot spring deposits, Alberta.

1129. RENAUT, R.W., LONG, P.R., GONZALES, A., Univ. Saskatchewan (Geological Sciences), York Univ. (Geography):
Sedimentology and geochemistry of the saline lakes of Interior British Columbia, 1984-; M.Sc. thesis (Gonzales).

Continuing studies of the sedimentology, mineralogy and brine evolution of the saline lakes of the Fraser Plateau. Emphasis is being given to those lakes precipitating epsomite and natron. Also, the origins of the magnesium carbonate deposits near Clinton and Meadow Lake.

1130. SCHAFER, C.T., Geol. Surv. Can.:
The Recent paleoclimatic and paleoecologic records in fjord sediments, 1980-.

1131. SYVITSKI, J.P.M., Geol. Surv. Can.:
The physical behaviour of suspended particulate matter (spm) in natural aqueous environments, 1981-.

1132. SYVITSKI, J.P.M., Geol. Surv. Can.:
Sedimentology of fjords, 1981-.

1133. SYVITSKI, J.P.M., Geol. Surv. Can.:
Sedflux: On the transfer of sediment from land to the continental shelf, 1986-.

1134. TAYLOR, R.B., Geol. Surv. Can.:
Coastal morphology and sediment dynamics, southeast and east Cape Breton Island, Nova Scotia, 1980-.

1135. YOUNG, H.R., NELSON, C.S., Brandon Univ. (Geology), Univ. Waikato, Hamilton, New Zealand (Earth Sciences):
Microbial degradation of cool-water skeletal carbonates on Scott Shelf, northwestern Vancouver Island, British Columbia, 1982-87.

Manuscript completed; to be included in special volume on cool-water carbonates.

1136. **KING, R.H., KELLY, P., Univ. Western Ontario (Geography):** Soil variability in a Holocene chronosequence, 1985-87; M.Sc. thesis (Kelly).

See:

Holocene palaeoenvironmental reconstruction of the Truelove Lowland, Devon Isalnd, N.W.T.; Abstracts 16th Arctic Workshop, Boreal Institute for Northern Studies, Univ. Alberta, Edmonton, April 30-May 2, p. 81-85, 1987.

Soil development on a chronosequence of raised beaches, Truelove Lowland, Devon Island, N.W.T.; Abstracts, Association of Canadian Universities for Northern Studies, National Student Conference on Northern Studies, Conference Centre, Ottawa, November 18-19, p. 56, 1986.

A chronosequence of soils is located on a series of raised beaches in Truelove Lowland, Devon Island. These raised beaches, ranging in age from the present to approximately 10,250 RCYBP, have formed in response to glacio-isostatic uplift and form an excellent chronological control for soil development. A total of 288 bulk soil samples have been collected from 96 soil profiles on 24 of the raised beaches. Three samples were collected from each beach at three depths. These samples are now being analyzed for pH, Total Nitrogen, particle size, organic carbon, exchangeable bases and extractable Fe and Al. The analytical results will be subjected to an analysis of variance to determine variances attributable to differences in the age of the sites and other site-specific factors.

1137. **RUTHERFORD, G.K., BUSTOS, L., Queen's Univ. (Geography):** Pedogenesis of soils formed on basic igneous rocks in Canada; 1983-; M.Sc. thesis (Bustos).

Research interest in paleosols developed out of main topic.

1138. **WINTERHALDER, K., SKRABA, D., Laurentian Univ. (Biology):** 1) Effects of land reclamation practices, especially the application of ground dolomitic limestone, on groundwater and streamflow chemistry, 2) Nitrogen fixation in revegetated soils, 1986-; M.Sc. thesis (Skraba).

See:

The effect of applying ground limestone to the surface of acid, metal-contaminated land on groundwater and streamflow quality; Proc. Ontario Chapter Canadian Land Reclamation Assoc., May 5-6, 1986.

STRATIGRAPHY/STRATIGRAPHIE

PRECAMBRIAN/PRÉCAMBRIEN

1139. AITKEN, J.D., Geol. Surv. Can.: Helikian and Hadrynian stratigraphy Eastern Cordillera and Interior Platform, 1973-.

1140. COOK, D.G., Geol. Surv. Can.: Stratigraphy and structure of northern Franklin Mountains and adjacent plans, District of Mackenzie, 1985-.

1141. EASTON, R.M., Ontario Geol. Surv.: Paleoenvironment and facies of the Apsley Formation, Grenville Structural Province, Ontario, 1986-87.

See:

Paleoenvironment and facies of the Apsley Formation; Ontario Geol. Surv., Misc., Paper 131, p. 141-151, 1986.

Subaqueous pyroclastic volcanism, inferences from the Precambrian of Ontario; Hawaii Symp. on How Volcanoes Work, Abstracts, Hilo, Hawaii, p. 59, 1987.

Field studies completed in 1986 reveal that the Apsley Formation represents a pyroclastic (turbidite) fan composed dominantly of subaqueously erupted volcanic material. Geochemical work will be completed in 1987. Final report in preparation.

1142. FROESE, E., Geol. Surv. Can.: Regional correlations, gold-bearing volcanic belts, Flin-Flon – Southend – La Ronge, Saskatchewan, 1985-.

1143. GENEST, S., KISH, L., IREMMERI, Université de Montréal, (Géologie), Ministère de l'Énergie et des Ressources du Québec: Compilation géoscientifique et analyses lithostratigraphique, structurale et métallogénique du Bassin d'Otish, Québec, 1985-87; thèse de doctorat (Genest).

1144. HENDERSON, J.R., Geol. Surv. Can.: Geology of the Foxe Fold belt (East half), Baffin Island, District of Franklin, 1979-.

1145. HOFFMAN, P.F., Geol. Surv. Can.: Hepburn batholith, Hepburn Lake map-area, District of Mackenzie, 1977-.

1146. JACKSON, G.D., Geol. Surv. Can.: Operation Borden, District of Franklin, 1977-.

1147. LACOSTE, P., ROCHELEAU, M., HÉBERT, R., ST-JULIEN, P., GAUDREAU, R., Université Laval (Géologie): Synthèse stratigraphique et paléogéographique, Cantons de Louvicourt, Vauquelin, Pershing et Haig, Abitibi, Québec, 1985-88; thèse de doctorat (Lacoste).

Voir:

Géologie et gîtologie du secteur Louvicourt-Vauquelin Abitibi. Rapport d'étape (phase 1); Ministère de l'Énergie et des Ressources du Québec, MB 86-67, 1986.

Cantons de Vauquelin et de Pershing, Abitibi-est Carte annotée; ibid., DP 85-32, 1986.

Présentation d'un modèle paléogéographique et des implications métallogéniques à partir d'une cartographie à l'échelle 1:20 000 et d'études volcanologiques, sédimentologiques et de géologie structurale.

1148. MUIR, T.L., Ontario Geol. Surv.: Hemlo tectono-stratigraphic study, Ontario.

1149. MURPHY, D.C., ROSS, G.M., Univ. British Columbia (Geological Sciences), Washington Univ., St. Louis, Missouri: Stratigraphy and depositional environments of Late Proterozoic Kaza Group and implications for evolution of Windermere "basin", 1983-.

1150. RACINE, M., ROCHELEAU, M., ST-JULIEN, P., Université Laval (Géologie): Stratigraphie et géologie structurale du Groupe de Trivio au voisinage de la mine Chimo, Abitibi, Québec, 1985-87; thèse de M.Sc. (Racine).

1151. ROCHELEAU, M., ST-JULIEN, P., HÉBERT, R., VERPAELST, P., MUELLER, W., GUHA, J., Universite Laval (Géologie), UQAT, UQAC: Stratigraphie, paléogéographie et implications metallogéniques de quelques séquences archéennes dans la ceinture, d'Abitibi, Québec, 1985-88.

See:

Composition of Archean sedimentary rocks in the Archean Abitibi Belt, Quebec, Canada: Its role in interpretation of basin evolution; IAS 12th Internat. Congress, Canberra, Abstracts, p. 260, 1986.

Diapirism during regional compression: The structural pattern in the Chibougamau region of the Archean Abitibi Belt, Quebec; Geologische Rundschau, vol. 75, no. 3, p. 715-736, 1986.

Etudes de stratigraphie, sedimentologie, volcanologie, géologie structural et metallogénie dans les régions de Rouyn-Val-d'Or, de Louvicourt et de Chibougamau.

1152. SIMARD, S., Universite de Montreal (Geologie): Stratigraphie et volcanisme dans la partie orientale de la bande volcano-sedimentaire archéenne Frotet-Evans, Quebec, 1978-86; Ph.D. these de doctorat.

Voir:

Stratigraphie et volcanisme dans la partie orientale de la bande volcano-sedimentaire archéenne Frotet-Evans, Quebec; Ministere de l'Énergie et des Ressources du Québec, MB-87-17, 1987.

PALEOZOIC/PALÉOZOIQUE

1153. AITKEN, J.D., Geol. Surv. Can.: Lower Paleozoic stratigraphy, southern Rocky Mountains, Alberta and British Columbia, 1972-.

1154. BÉLAND, J., TRZCIENSKI, W.E., Jr., MARQUIS, R., Université de Montréal (Géologie): Stratigraphie, structure et métamorphisme de l'anticlinorium de Sutton, Estrie, Québec, 1984-87; thèse de doctorat (Marquis).

Analyses structurale et travaux pétrographiques en cours. Stratigraphie coherente établie. Relations de l'ecaille du Groupe d'Oak Hill aux unités lithotectoniques adjacentes à préciser.

1155. BERGERON, M., MAMET, B., Université de Montréal (Geologie): Stratigraphie et microfacies carbonatés de la Formation Mount Head, Alberta, 1984-88; these de doctorat (Bergeron).

1156. BOLTON, T.E., Geol. Surv. Can.: Silurian-Ordovician macrobiostratigraphy of Anticosti Island, Quebec, 1974-.

See:

Early Silurian Bryozoa from the Clemville Formation of the Port Daniel region, Gaspésie Peninsula, Quebec; Geol. Surv. Can., Paper 86-1B, p. 97-106, 1987.

Chaetitopora (Anthozoa, Tabulata) in the Upper Ordovician rocks of central and eastern Canada; ibid., p. 107-110, 1987.

Ellisites, an upper Ordovician heliolitid coral intermediate between coccoserids and proporids; Palaeontology, vol. 29, pt. 2, p. 391-413, 1986.

1157. CHRISTIE, R.L., Geol. Surv. Can.: Geological reconnaissance, southeastern margin of Franklinian geosyncline, 1980-.

1158. COLPRON M., Universite de Burlington: Stratigraphie et structurographie Groupe d'Oak Hill, Anticlinorium de Sutton, Québec, 1986-89; these de maitrise.

Tracer le carte géologique, cartographier l'anticlinorium de Sutton, cartographier le Groupe d'Oak Hill, et region du Lac Brome.

1159. COUSINEAU, P., Universite Laval (Géologie): Stratigraphie et structurographie Groupe de Magog, Synclinorium de Saint-Victor, Québec, 1983-87; thèse de doctorat.

Voir:

Le domaine océanique entre Saint-Camille-de-Bellechasse et Lac Frontière; Ministere de l'Énergie et des Ressources du Québec, M.B. 86-25, 1986.

Tracer la carte géologique, cartographier le Synclinorium de Saint-Victor, cartographier le Groupe de Magog, et region de St-Joseph-de-Beauce à St-Pamphile.

1160. DIVERGILIO, M., LESPÉRANCE, P.J., Universite de Montreal (Géologie): Etude détaillée de la biostratigraphie et de l'évolution des communautés de macrofossiles de la formation d'Ellis Bay de l'île d'Anticosti, Québec, 1986-89; these de doctorat (DiVergilio).

Etablir une biostratigraphie de la formation d'Ellis Bay en utilisant les macrofossiles qui y sont présents. Etudier l'évolution des communautés de fossiles macroscopiques en fonction des facies et de la stratigraphie. Préciser la limite Ordovician-Silurien. Deux étés sur le terrain ont éte faits (étés 1982 et 1983).

1161. FRITZ, W.H., Geol. Surv. Can.: Cambrian biostratigraphy of the Canadian Cordillera, 1965-.

1162. GELDSETZER, H.H.J., Geol. Surv. Can.: Middle and Upper Devonian rocks in east-central British Columiba and west-central Alberta, 1979-.

See:

Sulfur-isotope anomaly associated with the Frasnian-Famennian extinction, Medicine Lake, Alberta, Canada; Geology, vol. 15, no. 5, p. 389-392, 1987.

1163. HOWIE, R.D., Geol. Surv. Can.: Compilation of geoscientific data in the Upper Paleozoic basins of southeastern Canada, 1971-.

See:

Windsor Group salt in the Cumberland Subbasin of Nova Scotia; Geol. Surv. Can., Paper 85-11, 1986.

1164. KENNEDY, D.J., Brock Univ. (Geological Sciences): Evidence for strike-slip faulting along a terrane boundary in southeastern Australia, 1984-88.

Conodonts and inarticulate brachiopods have been used to date strata in two small and isolated areas in northern Tasmania and SE Victoria. These two areas are believed to have been dismembered and carried to their present positions by mid-Paleozoic strike-slip faulting.

1165. KENNEDY, D.J., Brock Univ. (Geological Sciences):
Cambro-Ordovician boundary definition, 1985-88.

See:

New information on the base of the conodont *Cordylodus proavus* Zone, Cambro-Ordovician Boundary, Gorge Formation, Highgate Gorge, Vermont; Prel. results in Cambro-Ordovician Boundary Newsletter 22, 1986.

Homotaxial sequence of conodonts around the proposed Cambro-Ordovician boundaries; Cambro-Ordovician Boundary Newsletter 24, 1987.

1166. KOBLUK, D.R., NOOR, I., Univ. Toronto (Geology):
Stratigraphy and sedimentology of the early Middle Ordovician nearshore sediments across southern Ontario, 1983-; Ph.D. thesis (Noor).

1167. KNIGHT, I., Newfoundland Dept. Mines and Energy:
Lower Paleozoic autochthonous siliciclastic and carbonate rocks, western Newfoundland; Lower to Middle Cambrian transition, Canada Bay, Newfoundland, 1976-.

See:

Geology of Cambro-Ordovician rocks – the Port Saunders, St. John Island, Carter River and Torrent River map area; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987

1168. LABBE, J-Y., Universite Laval (Geologie):
Stratigraphie et structurographie Formation de Weedon, Anticlinorium de Sherbrooke, Que., 1986-89; these de maitrise.

Tracer la carte geologique, cartographier l'Anticlinorium de Sherbrooke, cartographier la Formation de Weedon, et région de Weedon.

1169. LESPERANCE, P.J., SHEEHAN, P.M., Universite de Montréal (Géologie), Milwaukee Public Mus.:
Biostratigraphie de l'Ashgillien de Belgique (Ordovicien Superieur), 1974-87.

1170. MAMET, B., ARMSTRONG, A.K., Université de Montréal (Géologie), USGS:
Corrélations du Carbonifère Inférieur, Texas, New Mexico, Arizona, 1986-87.

Corrélations sur Petits Formanifères des carbonates du Bassin de Pedregosa. Algues et microfacié faciès.

1171. MAMET, B., CLOUGH, J., WATTS, K., Université de Montréal (Géologie), Alaska Surv., Univ. Alaska:
Corrélations du Groupe de Lisburne, Sadlerochit et Shublik Mountains, Alaska, 1985-.

1172. MAMET, B., TAILLEUR, I., Université de Montreal (Géologie), USGS:
Stratigraphie du Dévonien final et du Carbonifère, DeLong Mountains, Alaska, 1982-.

1173. MARECHAL, P., Universite Laval (Geologie):
Stratigraphie et structurographie Groupe de Bennet, Quebec, 1986-89; thèse de doctorat.

Tracer la carte geologique, cartographier le Groupe de Bennet, et region de Pontbriand.

1174. MARQUIS, R., Université Laval (Géologie):
Stratigraphie et structurographie Groupe d'Oak Hill, Anticlinorium de Sutton, Quebec, 1982-88; these de doctorat.

Voir:

Geologie de la region de Richmond, Canton de Cleveland, Kingsey et Shipton; Ministère de l'Énergie et des Ressources du Quebec, MB 86-31, 1986.

Tracer la carte geologique, cartographier l'Anticlinorium de Sutton, cartographier le Groupe d'Oak Hill, et région de Richmond.

1175. MAYR, U., Geol. Surv. Can.:
Investigation of stratigraphy and tectonic development of lower Paleozoic Platform – Miogeocline margin zone, District of Franklin, 1985-.

1176. MCCABE, H.R., Manitoba Energy and Mines (Geol. Services):
Stratigraphic core hole program, 1969-.

To prepare regional correlation profiles for all Paleozoic formations in the Manitoba outcrop belt and to provide detailed stratigraphic data for specific projects such as the Devonian Winnipegosis Reed Study, as well as the 1:250 000 regional geologic map compilations.

1177. MCCABE, H.R., Manitoba Energy and Mines (Geol. Services):
Devonian reef study, 1972-.

See:

Devonian stratigraphy of the southwestern Manitoba outcrop belt; C.S.P.G. Field Trip Guidebook, June 4-7, 1986.

To determine a model or framework for Devonian reefs of the Winnipegosis Formation, utilizing primarily stratigraphic core hole data to provide detailed reef profiles.

1178. MEIJER-DREES, N.C., Geol. Surv. Can.:
Middle and Upper Devonian rocks in the subsurface of west-central Alberta, 1981-.

See:

Evaporitic deposits of western Canada; Geol. Surv. Can., Paper 85-20, 1986.

1179. MEIJER-DREES, N.C., Geol. Surv. Can.:
Middle and Upper Devonian stratigraphy in the subsurface of west central Alberta and northeastern British Columbia, 1986-.

1180. MORROW, D.W., Geol. Surv. Can.:
Lower Paleozoic stratigraphy and facies relationships in Wernecke, Ogilvie and Mackenzie Mountains, Yukon, 1985-.

1181. NASSICHUK, W.W., Geol. Surv. Can.:
Stratigraphy and paleontology of Upper Paleozoic rocks on parts of Ellesmere, Melville and Axel Heiberg Islands, District of Franklin, 1968-.

See:

Lower Permian (Asselian) ammonoids and conodonts from the Belcher Channel Formation, southwestern Ellesmere Island; Geol. Surv. Can., Paper 86-1B, p. 411-416, 1986.

Microcodiaceans in the Visean Emma Fiord Formation, Devon Island, Arctic Canada; ibid., p. 467-470, 1986.

1182. NASSICHUK, W.W., Geol. Surv. Can.:
Upper Paleozoic stratigraphy, Melville Island, District of Franklin, 1984-.

1183. NISBET, E.G., CALDWELL, W.G.E., HAID, J., Univ. Saskatchewan (Geological Sciences): Stratigraphic and tectonic evolution of the Swift Current Plateau of the Williston Basin in Saskatchewan, 1986-; M.Sc. thesis (Haid).

See:

Regional setting of the Phanerozoic rocks in Saskatchewan; Sask. Geol. Soc., Sp. Publ. 9, 1987.

To elucidate the history of growth of the Swift Current Platform of Saskatchewan during the subsidence of the intracratonic Williston Basin.

1184. NORFORD, B.S., Geol. Surv. Can.: Ordovician and Silurian biostratigraphy of British Columbia, Alberta, Manitoba, Yukon, Mackenzie and Franklin, 1961-.

1185. NORFORD, B.S., Geol. Surv. Can.: Paleozoic biostratigraphy and biofacies studies, Arctic Islands, District of Franklin, 1984-.

1186. NORFORD, B.S., Geol. Surv. Can.: Geochemical, sedimentological, biological and biostratigraphic changes across the Frasnian-Famennian boundary interval (Upper Devonian), 1985-.

1187. NORRIS, A.W., Geol. Surv. Can.: Devonian biostratigraphy of the northern Yukon Territory and adjacent District of Mackenzie and Alberta, 1970-.

1188. PEDDER, A.E.H., Geol. Surv. Can.: Upper Silurian and Devonian biostratigrapy western and northern Canada, 1968-.

See:

Species of the rugose coral genus **Minussiella** from the Middle Devonian of western and Arctic Canada; Geol. Surv. Can., Paper 86-1B, p. 471-488, 1986.

Late Devonian rugose corals and the Frasnian-Famennian crisis; Can. J. Earth Sci., vol. 23, no. 9, p. 1265-1287, 1986.

1189. PICKERILL, R.K., TANOLI, S.K., Univ. New Brunswick (Geology): Lithostratigraphy of the Cambrian-Ordovician Saint John Group, southern New Brunswick, 1983-; Ph.D. thesis (Tanoli).

1190. RICHARDS, B.C., Geol. Surv. Can.: Carboniferous stratigraphy and sedimentology of northeastern British Columbia and northwestern Alberta, 1981-.

1191. SANFORD, B.V., Geol. Surv. Can.: Lower Paleozoic geology of Eastern Canada, 1975-.

1192. STRUIK, L.C., Geol. Surv. Can.: Stratigraphy and tectonics of the western margin of the southern Omineca Belt, British Columbia, 1982-.

See:

Imbricated terranes of the Cariboo gold belt with correlations and implications for tectonics in southeastern British Colubmia; Can. J. Earth Sci., vol. 23, no. 6, p. 1047-1061, 1986.

1193. TREMBLAY, A.B., Universite Laval (Geologie): Stratigraphie et structurographie Formation d'Ascot, Anticlinorium de Sherbrooke, Quebec, 1985-89; these de doctorat.

Voir:

La formation d'Ascot-centre, Sherbrooke et Ascot-Corner; Ministere de l'Énergie et des Ressources du Quebec, D.P. 86-07, 1986.

La Formation d'Ascot entre Sherbrooke et Ascot-Corner; ibid., M.B. 86-26, 1986.

Tracer la carte geologique, cartographier l'Anticlinoriun de Sherbrooke, cartographier la Formation d'Ascot, et region de Sherbrooke.

1194. TRETTIN, H.P., Geol. Surv. Can.: Stratigraphic-structural analysis of Proterozoic to Devonian rocks, northern Ellesmere and Axel Heiberg islands, District of Franklin, 1986-.

See:

Investigations of Paleozoic geology, northern Axel Heiberg and northwestern Ellesmere islands; Geol. Surv. Can., Paper 87-1A, p. 357-367, 1987.

1195. WILLIAMS, H., CAWOOD, P.A., Memorial Univ. (Earth Sciences): Stratigraphy, structure and remapping of the entire Humber Arm Allochthon, western Newfoundland, 1978-87.

A compilation of the entire Humber Arm Allochthon is now in progress. It incorporates data from all the latest 1:50,000 maps published over the past 7 years.

MESOZOIC/MÉSOZOIQUE

1196. ASCOLI, P., Geol. Surv. Can.: Biostratigraphic zonation (Formaninifera-Ostracoda) of the Mesozoic and Cenozoic rocks of the Atlantic Shelf, 1971-.

1197. BANERJEE, I., Geol. Surv. Can.: Stratigraphy and sedimentology of the Basal Colorado Sandstone (Cretaceous), Cessford Field, southern Alberta, 1986-.

1198. BENNETT, R.W., Saskatchewan Geol. Surv.: Local and regional stratigraphic cross-sections of western Saskatchewan, 1984-.

This project is the on-going production of a series of local and regional stratigraphic cross-sections, which will grid Saskatchewan north-south and east-west on a township/range interval for local sections and every fifth township/range for regional sections.

1199. BENNETT, R.W., WILSON, M.A., Saskatchewan Geol. Surv.: Detailed isopach and structure contour maps of the Mannville Heavy Oil Sands of west central Saskatchewan (computer plotted), 1986-.

1200. BUSTIN, R.M., MCKENZIE, K., Univ. British Columbia (Geological Sciences): Stratigraphy and sedimentology of the Sustut Basin, British Columbia, 1984-; Ph.D. thesis (McKenzie).

The stratigraphic succession, sedimentology and depositional history of the Sustut Basin is being investigated.

1201. BUSTIN, R.M., MOFFAT, I., Univ. British Columbia (Geological Sciences): Stratigraphy and structure, northern Bowser Basin 1983-; Ph.D. thesis (Moffat).

Structure, stratigraphy and sedimentology of strata in the Grandhog Coalfield, northcentral Bowser Basin are being investigated.

1202. CALDWELL, W.G.E., NORTH, B.R., GRAMBO, G.P., LARSON, B., Univ. Saskatchewan (Geological Sciences): Biostratigraphic studies in the Cretaceous System of the Western Interior Basin, 1961-; M.Sc. theses (Grambo, Larson).

Current emphasis is being placed on developing a foraminiferal zonal scheme for the pre-Albian rocks of the southern Interior Plains (mainly northeastern B.C.) and testing the extent of some early-

Campanian foraminiferal zones southwards into the United States.

1203. DIXON, J., Geol. Surv. Can.:
Geology of the Beaufort-Mackenzie Basin, 1979-.

1204. DIXON, J., Geol. Surv. Can.:
Stratigraphy and sedimentology of Jurassic-Cretaceous strata, northern Cordillera, Yukon, 1985-.

See:

Comments on the stratigraphy, sedimentology and distribution of the Albian Sharp Mountain Formation, northern Yukon; Geol. Surv. Can., Paper 86-1B, p. 375-381, 1986.

1205. EMBRY, A.F., Geol. Surv. Can.:
Mesozoic stratigraphy and basin analysis of Sverdrup Basin, Arctic Archipelago, 1975-.

See:

Stratigraphic subdivision of the Blind Fiord and Bjorne formations (Lower Triassic), Sverdrup Basin, Arctic Islands; Geol. Surv. Can., Paper 86-1B, p. 329-340, 1986.

Stratigraphic subdivision of the Awingak Formation (Upper Jurassic) and revision of the Hiccles Cove Formation (Middle Jurassic), Sverdrup Basin, Arctic Islands; ibid., p. 341-349, 1986.

1206. GIBSON, D.W., Geol. Surv. Can.:
Stratigraphy and sedimentology of the Lower Cretaceous Gething Formation, Rocky Mountain Foothills, Alberta and British Columbia, 1979-.

1207. GIBSON, D.W., Geol. Surv. Can.:
Stratigraphy and sedimentology of the Lower Cretaceous Hulcross and Boulder Creek formations, Rocky Mountain Foothills, Alberta and British Columbia, 1984-.

1208. GILBOY, C.F., Saskatchewan Geol. Surv.:
Geology of the Upper Colorado Group and the Milk River Formation (Upper Cretaceous) of southwestern Saskatchewan, 1986-.

1209. JANSA, L.F., Geol. Surv. Can.:
Reconnaissance field study of the Mesozoic sequences outcropping on the Iberian Peninsula, 1977-.

1210. LANE, D.M., Saskatchewan Geol. Surv.:
Saskatchewan Energy and Mines, Geological cross section series east-west control section, Miss-E-85-1, 1985-.

This east-west section extends from 16-36-1-18-W2 to 16-29-1-30-W1, a distance of 209 km. Logs from 12 wells are used in this section.

1211. MCNEIL, D.H., Geol. Surv. Can.:
Cretaceous-Tertiary biostratigraphy and paleoecology, polynomorphs and microfossils, 1985-.

1212. MOSSOP, G., SHETSEN, I., LOSERT, J., UNDERSCHULTZ, J., SAUVEPLANE, C., LYTVIAK, A., HITCHON, B., O'CONNELL, S., BACHU, S., and 60 geologists from industry, government and academia, Alberta Research Council (Geological Survey):
Geological atlas of the western Canada sedimentary basin, 1987-91.

As a community of geologists in western Canada, to compile and produce a new atlas of the subsurface geology of the Western Canada Sedimentary Basin. Sponsorship funding is in place from the Alberta Research Council, Alberta Energy and the Canadian Society of Petroleum Geologists, and compilation work has begun, coordinated by the Basin Analysis Group of the Alberta Geological Survey.

1213. POULTON, T.P., Geol. Surv. Can.:
Jurassic biostratigraphy of selected areas of western and Arctic Canada, 1976-.

See:

Upper Jurassic dinoflagellate cysts from strata of northeastern British Columbia; Geol. Surv. Can., Paper 86-1B, p. 519-537, 1986.

A new genus and subgenus and two new species of latest Jurassic oxytomid bivalves from Arctic Canada; Can. J. Earth Sci., vol. 24, no. 4, p. 711-722, 1987.

1214. STELCK, C.R., KOKE, K.R., LECKIE, D.A., Univ. Alberta (Geology), Geol. Surv. Can.:
Biostratigraphy of mid Cretaceous strata, western Canada, 1950-.

See:

Foraminiferal zonation of the Viking interval in the Hasler shale (Albian) northeastern British Columbia; Can. J. Earth Sci., vol. 24, 1987.

The foredeep of the western Canada basin in northeastern British Columbia has preserved a more continuous stratigraphic record allowing evaluation of the extent of diastems and unconformities found within the Albian section in the other parts of western Canada. Arenaceous foraminifera provide the calibration for identification of the additional recognized subzones thorugh tedious taxonomy.

1215. STOTT, D.F., Geol. Surv. Can.:
Jurassic and Cretaceous Minnes Group, Alberta and British Columbia, 1978-.

1216. STOTT, D.F., Geol. Surv. Can.:
Syntheses of Mesozoic and Cenozoic rocks of eastern Cordillera and Plains, 1981-.

1217. TEMPELMAN-KLUIT, D.J., Geol. Surv. Can.:
Stratigraphy, structure and metallogeny of the northern part of the Intermontane Belt (Whitehorse trough) in the Canadian Cordillera, 1977-.

See:

"Antler" clastics in the Canadian Cordillera; Geology, vol. 15, no. 2, p. 103-107, 1987.

1218. TIPPER, H.W., Geol. Surv. Can.:
Biostratigraphic study of Mesozoic rocks in the Intermontane and Insular Belts of the Canadian Cordillera, 1975-.

See:

Lower to Middle Jurassic (Pliensbachian to Bajocian) stratigraphy of the northern Spatsizi area, north-central British Columbia; Can. J. Earth Sci., vol. 23, no. 12, p. 1963-1973, 1986.

1219. WADE, J.A., Geol. Surv. Can.:
Regional subsurface geology of Mesozoic and Cenozoic rocks of the Atlantic continental margin, 1972-.

1220. WALL, J.H., Geol. Surv. Can.:
Mesozoic and Tertiary biostratigraphy and paleoecology, District of Franklin, 1985-.

CENOZOIC/CENOZOIQUE

1221. MUTUNGA, E., CAMERON, B., MACLEAN, B., Acadia Univ. (Geology):
Tertiary seismic stratigraphy of the west-central Scotian slope, Nova Scotia, 1987-88, M.Sc. thesis (Mutunga).

To determine the stratigraphy, structure, geologic history and hydrocarbon potential of Tertiary rocks of the west-central part of the continental slope of Nova Scotia. Seismic stratigraphic and well cutting sanalyses will be used to construct facies models.

1222. YORATH, C.J., Geol. Surv. Can.:
The Canadian Pacific continental margin, 1977-

BRITISH COLUMBIA/ COLOMBIE-BRITANNIQUE

1223. BLOODGOOD, M.A., ROSS, J.V., Univ. British Columbia (Geological Sciences):
Structural transitions within the Quesnel Terrane, Eureka Peak area, central British Columbia, 1985-87; M.Sc. thesis (Bloodgood).

See:

Geometry of a convergent zone – British Columbia; Tectono-physics, Sp. vol. 100, 1987.

1224. BROWN, R.L., BARDOUX, M., Carleton Univ. (Geology):
Study of a major tectonic denudation zone along the Okanagan Valley, south-central British Columbia, 1984; Ph.D. thesis (Bardoux).

1225. BROWN, R.L., BOSDACHIN, R., Carleton Univ. (Geology):
Structure and metamorphism of the Mantling Gneisses: Eagle Ridge, southern British Columbia, 1986; M.Sc. thesis (Bosdachin).

1226. BROWN, R.L., CARR, S., Carleton Univ. (Geology):
Structure and metamorphism of the southern flank of Thor-Odin Gneiss Complex, British Columbia and implications for the tectonic evolution of the Monashee Complex, 1986; Ph.D. thesis (Carr).

1227. BROWN R.L., HARRAP, H., Carleton Univ. (Geology):
Structural, metamorphic, and geodynamic investigation of the Monashee Complex, Mt. MacPherson – Mt. Tilley area, southeast British Columbia, 1986; M.Sc. thesis (Harrap).

1228. BROWN R.L., JOHNSON, B., Carleton Univ. (Geology):
Tectonics of the Eagle River Fault, western Monashee Mountains, British Columbia, 1987; Ph.D. thesis (Johnson).

1229. BROWN, R.L., REES, C., Carleton Univ. (Geology):
The Intermontane – Omineca Belt boundary in the Quesnel Lake area, east-central British Columbia: tectonic implications based on geology, structure and paleomagnetism. 1980-87; Ph.D. thesis (Rees).

1230. BROWN, R.L., SCAMMELL, R., Carleton Univ. (Geology):
Stratigraphy, structure and metamorphism of the north flank of the Monashee Complex, southeastern British Columbia: a record of Proterozoic extension and Phanerozoic crustal thickening, 1984-86; M.Sc. thesis (Scammell).

1231. GARWIN, S.L., ROSS, J.V., Univ. British Columbia (Geological Sciences):
Deformation and metamorphism in the northern Shuswap metamorphic complex, western Cariboo Mountains, British Columbia, 1985-88; M.Sc. thesis (Garwin).

1232. HAMMACK, J., ROSS, J.V., Univ. British Columbia (Geological Sciences):
Strain and fracture porosity in the Mt. Head Fm. at Overfold Mountain, southeastern British Columbia, 1986-88; M.Sc. thesis (Hammack).

1233. LEWIS, P.D., ROSS, J.V., Univ. British Columbia (Geological Sciences):
Structural studies in the Queen Charlotte Islands, British Columbia; Ph.D. thesis (Lewis).

1234. LEWIS, P.D., ROSS, J.V., Univ. British Columbia (Geological Sciences):
Polyphase deformation in the western Cariboo Mountains, British Columbia: style and tectonic implications, 1985-87; M.Sc. thesis (Lewis).

1235. MURPHY, D.C., Univ. British Columbia (Geological Sciences):
Lateral brittle-ductile transition, Cariboo Mountains, British Columbia, 1985-.

See:

Suprastructure-infrastructure transition, east-central British Columbia: geometry, kinimatics, and tectonic implications; J. Struct. Geol., vol. 9, p. 13-30, 1987.

Rheological stratification of the lithosphere; Tectonophysics, vol. 132, p. 281-295, 1987.

1236. PARRISH, R.R., Geol. Surv. Can.:
Tectonic investigations of the Valhalla Gneiss Complex and vicinity, southeast British Columbia, 1985-.

1237. RADLOFF, J., ROSS, J.V., Univ. British Columbia (Geological Sciences):
Black Riders ultramafic, central British Columbia: mechanics of emplacement and rheologic nature of ancient oceanic crust, 1987-89; M.Sc. thesis (Radloff).

See:

Nature and rheology of Cordilleran upper mantle: inferences from peridotite xenoliths; Tectonophysics, vol. 90, 1986.

1238. ROSS, J.V., Univ. British Columbia (Geological Sciences):
Geometry, strain and mechanics of evolution of convergent suture zone in the Cariboo Mountains central British Columbia, 1984-88.

See:

Geometry of a convergent margin; Tectonophysics, sp. vol. 100, 1987.

1239. TAYLOR, G.C., Geol. Surv. Can.:
Structural and stratigraphic studies of northeast British Columbia, 1981-.

1240. THOMPSON, R.I., Geol. Surv. Can.:
Detailed geological study of selected areas within the Foothills and Rocky Mountains belts of the Monkman Pass map area – with emphasis on the structure, 1978-.

MANITOBA/MANITOBA

1241. FROESE, E., Geol. Surv. Can.:
Structural studies, Thompson Belt, Manitoba, 1985-.

1242. GORDON, T.M., Geol. Surv. Can.:
Geological evolution of the southwest Churchill Province, Manitoba, 1985-.

See:

Metamorphic studies in the transition zone between the Lynn Lake Greenstone Belt and the Kisseynew Gneiss Belt, Laurie Lake, Manitoba; Geol. Surv. Can., Paper 86-1B, p. 539-546, 1986.

1243. WEBER, W., ZWANZIG, H.V., Manitoba Energy and Mines (Geol. Services):
Tectonic evaluation of the Manitoba portion of the Trans-Hudson orogen, 1986-89.

As part of lithoprobe proposal to transect the Trans-Hudson orogen.

NEW BRUNSWICK/ NOUVEAU-BRUNSWICK

1244. CURRIE, K.L., Geol. Surv. Can.:
Diagenesis and structure of the Albert Formation, New Brunswick, 1985-.

1245. VAN STAAL, C., Geol. Surv. Can.:
Structural analysis of the northern part of the Miramichi Massif, New Brunswick, 1985-.

1246. WILLIAMS, P.F., MCALLISTER, A.L., MORETON, C., Univ. New Brunswick (Geology): The structure and stratigraphy of the Heath Steele Mines ore zones, Newcastle, New Brunswick, 1984-88; Ph.D. thesis (Moreton).

See:

Structural and stratigraphic relationships of the B-zone orebody, Heath Steele Mines, Newcastle, New Brunswick; Geol. Surv. Can., Paper 86-1B, p. 57-64, 1986.

A structural history for the B, B5 and E zones has been established. A simplified stratigraphy for the mine is now preferred based on detailed mapping and geometrical analysis of the B and B5 zones. A detailed report of the same is in preparation.

NEWFOUNDLAND/LABRADOR/ TERRE-NEUVE/LABRADOR

1247. GRENIER, R., CAWOOD, P.A., WILLIAMS, H., Memorial Univ. (Earth Sciences): Long Range Structural Front between St. Pauls Inlet and Portland Creek Pond, Newfoundland, 1986-88; M.Sc. thesis (Grenier).

One field season complete. Field work to be completed in summer of 1987. Thesis should be submitted by spring of 1988.

1248. O'BRIEN, B.H., Newfoundland Dept. Mines and Energy: Geological studies in the La Poile Bay - Couteau Bay area, southwestern Newfoundland, 1986-.

See:

The lithostratigraphy and structure of the Grand Bruit — Cinq Cerf area, southwest Newfoundland; Newfoundland Dept. Mines and Energy, Rept. 87-1, 1987.

1249. WILLIAMS, H., Memorial Univ. (Earth Sciences): The Appalachian/Caledonian Orogen Canada and Greenland; Decade of North American Geology, Volume F-1, 1982-88.

See:

Geology of the Canadian Appalachians; in Perspectives in Regional Geological Syntheses, Geol. Soc. Amer., DNAG Sp. Publ. 1, p. 57-66, 1986.

Well over half this volume is now in hand in first draft form. Williams is now working full time on this project.

1250. WILLIAMS, P.F., CARON, A., Univ. New Brunswick (Geology): Microstructural studies of the Dover Fault, northeastern Newfoundland, 1984-88; Ph.D. thesis (Caron).

The study demonstrates that the Dover Fault was initiated as a sinistral shear zone which has been overprinted by a later dextral movement. The fault zone was dissected by multiple brittle faults during the Early Carboniferous whereas the initiation of the fault zone occurred in Late Silurian to Early Devonian.

1251. WILLIAMS, P.F., ELLIOTT, C.G., LAFRANCE, B., Univ. New Brunswick (Geology): Structural and tectonic studies in Notre Dame Bay, north-central Newfoundland, 1982-; Ph.D. theses (Elliott, Lafrance).

See:

Saffordophyllum and evidence for thrusting in the Cobs Arm Sequence, Newfoundland; Can. J. Earth Sci., vol. 23, p. 1228-1231, 1986.

NORTHWEST TERRITORIES/ TERRITOIRES DU NORD-OUEST

1252. CHRISTIE, R.L., Geol. Surv. Can.: Structural and stratigraphy of the Paleozoic-Mesozoic basins of Melville and adjacent island, District of Franklin, 1984-.

1253. CULLEN, R., FYSON, W.K., Univ. Ottawa (Geology): Stratigraphy, structures and metamorphism of volcanic and sedimentary rocks, Fenton Lake, Slave Province, N.W.T., 1985-; M.Sc. thesis (Cullen).

1254. EMBRY, A.F., Geol. Surv. Can.: Stratigraphy and structure of Arctic Continental Shelf, District of Franklin, 1984-.

1255. FYSON, W.K., Univ. Ottawa (Geology): Structural patterns and tectonics of metamorphic terrains, Slave Province, 1972-.

1256. FYSON, W.K., Univ. Ottawa (Geology): Deformation studies, Yellowknife Basin, Northwest Territories.

Detailed studies to clarify structural relations in the Slave Province.

1257. HANMER, S.K., Geol. Surv. Can.: Displacement history of major shear zones in Western Churchill Province, 1983-.

1258. HARRISON, J.C., Geol. Surv. Can.: Structure and tectonics of Prince Patrick and adjacent, islands, District of Franklin, 1986-.

1259. HENDERSON, J.R., Geol. Surv. Can.: Geology of the Penrhyn Fold Belt, Melville Peninsula, District of Franklin, 1976-.

1260. HILDEBRAND, R.S., Geol. Surv. Can.: Hottah Terrane, District of Mackenzie, 1982-.

1261. HILDEBRAND, R.S., Geol. Surv. Can.: Central Great Bear Magnetic Zone, District of Mackenzie, 1986-.

See:

Geological investigations in Calder River map area, central Wopmay Orogen, District of Mackenzie; Geol. Surv. Can., Paper 87-1A, p. 699-711, 1987.

1262. HOFFMAN, P.F., Geol. Surv. Can.: Externides of Wopmay Orogen, District of Mackenzie, 1981-.

1263. KING, J.E., Geol. Surv. Can.: Structural studies in the metamorphic hinterland of Wopmay Orogen, District of Mackenzie, 1985-.

See:

Contrasting styles of basement deformation and longitudinal extension in the metamorphic-internal zone of Wopmay Orogen, N.W.T.; Geol. Surv. Can., Paper 87-1A, p. 515-531, 1987.

1264. KUSKY, T., KIDD, W., ISSACHSON, C., Indian Affairs and Northern Development (NAP) Canada, John Hopkins Univ. (Geology): Structural geology of the Point Lake area (Keskarrah Bay) and the Cameron River volcanic belt/Sleepy Dragon Metamorphic Complex, N.W.T.; Ph.D. theses (Kusky, Issachson).

Geochronology and structural mapping of the relations of the volcanics of Yellowknife Supergroup to the basement complex.

1265. LANE, L.S., Geol. Surv. Can.: Structural geology and tectonic and stratigraphic analyses, northern Mainland and adjacent continental shelf, District of Mackenzie, 1984-.

1266. OKULITCH, A.V., Geol. Surv. Can.: Stratigraphy, structure and tectonics, Innuition Fold Belt, Ellesmere Island, District of Franklin, 1979-.

1267. ROACH, D., FYSON, W.K., Univ. Ottawa (Geology):
Shear zones, Benigh Lake straight zone, Archean Slave Province, N.W.T., 1987-; Ph.D. thesis (Roach).

1268. STEPHENSON, R.A., Geol. Surv. Can.:
Structural, tectonic and stratigraphic analysis of the Arctic Islands, District of Franklin, 1985-.

1269. ST-ONGE, M.R., Geol. Surv. Can.:
Thrust-fold belt of Wopmay Orogen – internal zone, District of Mackenzie, 1981-.

See:

Zoned poikiloblastic garnets: P-T paths and syn-metamorphic uplift through 30 km of structural depth, Wopmay Orogen, Canada; J. Petrology, vol. 28, pt. 1, p. 1-21, 1987.

1270. WILLIAMS, G.K., Geol. Surv. Can.:
Northern basin analysis program: Redstone and Great Slave Lake map-areas, District of Mackenzie, 1971-.

NOVA SCOTIA/NOUVELLE-ÉCOSSE

1271. BROMLEY, M.H., STEVENS, G.R., CAMERON, B., Acadia Univ. (Geology):
Geology of the mélange at Clarke Head, Cumberland Country, Nova Scotia, 1986-87.

To map, characterize and discuss models for the origin of a mélange in a zone located at Clarke Head on the north shore of the Minas Basin near Parrsboro, Nova Scotia. No previous studies have focussed exclusively on this unique feature. It is characterized by the chaotic mixture of rock fragments varying in size from several hundreds of metres down to cobbles which are supported in a finer grained, quartzose, clayey and gypsiferous matrix. The unit contains rocks ranging in age from Helikian to late Carboniferous time. The mélange is a tectonic mélange formed in Westphalian time as the result of reactivation of the Minas Geofracture in the late stages of the Alleghanian orogeny. This activity resulted in disruption of the Carboniferous sequence which buried the shear zone. Shearing tectonics raised lozenges of deep-seated basement rocks into contact with the cover sequence, allowing them to become mixed during continued movement. The presence of syntectonic gypsum veins suggests that the depth of emplacement did not exceed 1650 metres. Subsequent sedimentation in the early Mesozoic Era buried the shear zone once again. In the later Mesozoic, graben formation related to the opening of the North Atlantic Ocean resulted in downfaulting of the Mesozoic section into contact with the mélange zone.

1272. WILLIAMS, P.F., HWANG, S.G., KEPPIE, J.D., Univ. New Brunswick (Geology), Nova Scotia Dept. Mines Energy:
Structural geology in Shelburn-Barrington area, Nova Scotia, 1985-; Ph.D. thesis (Hwang).

Shear zones have been newly mapped, to understand microstructural evolution of the shear zones and investigate associated mineralization (including a characterization of the fluids).

1273. WILLIAMS, P.F., HY, C., Univ. New Brunswick (Geology):
Gold-bearing veins in Nova Scotia, 1985-.

The relation between structure metamorphic veining are carefully examined. Compositions and temperatures of fluids realted to different episodes of vein emplacement are characterized.

ONTARIO/ONTARIO

1274. CHORLTON, L., BERGER, B., Ontario Geol. Surv.:
Interplay of the emplacement of small and medium scale granitoid plutons with structural activity and thermal development of a northeast arm of the Wabigoon greenstone belt, Northwest Ontario, 1986.

See:

Regional setting of the Goldlund Mine and other gold occurrences in the Cross Echo Lake, Northwestern Ontario; Ontario Geological Surv., Mis. Paper 132, 1986.

The setting of gold mineralization is assessed.

1275. CONNELLY, J.N., DIXON, J.M., CARMICHAEL, D.M., HANMER, S.K., Queen's Univ. (Geological Sciences), Geol. Surv. Can.:
The emplacement histroy of the Elzevir Batholith with respect to the Grenville Supergroup, southeastern Ontario, 1983-86; M.Sc. thesis (Connelly).

See:

Emplacement history of the Elzevir Batholith, Ontario; Geol. Assoc. Can., – Mineral. Assoc. Can. Annual Meeting, Program with abstracts, vol. 12, p. 34, 1987.

Strain patterns around and within a Grenville granitoid batholith (1240 Ma) suggest the batholith was emplaced diapirically into a regionally deforming terrane. Structural and metamorphic relationships suggests metasediments of the Flinton Group may have been tectonically emplaced.

1276. HANMER, S.K., Geol. Surv. Can.:
Structural studies in the Grenville Province of Ontario and western Quebec, 1983-.

1277. PERCIVAL, J.A., Geol. Surv. Can.:
Geological and geophysical studies of the Kapuskasing structure, Ontario, 1985-.

See:

The Kapuskasing uplift: Archean greenstones and granulites; Instit. Lake Superior Geol. 33rd Ann. Meeting, vol. 33, pt. 5, 1986.

1278. SANBORN-BARRIE, M., Ontario Geol. Surv.:
The structure and tectonic history of the northern Lake of the Woods greenstone belt and the Dryberry Granitoid Complex, Northwestern Ontario, 1986-87.

See:

Lake of the Woods structural study; Ontario Geol. Surv., Misc. Paper 132, p. 30-36, 1986.

Will participate at the Canadian Tectonics Group Meeting, Thunder Bay, October 1987 with a talk on "The Structure of the White Partridge Bay Group metasedimentary rocks, Kenora, Ontario", and will contribute to an abstract for Gold '88 on "Gold mineralization in Lake of the Woods, northwestern Ontario".

1279. THIVIERGE, R.H., FYSON, W.K., Univ. Ottawa (Geology):
Structural relationships at the northwestern margin of the central metasedimentary belt, Bancroft-Barry's Bay area, Grenville Province, Ontario, 1981-87; M.Sc. thesis (Thivierge).

1280. WHITE, J.C., BARNETT, R.L., Univ. New Brunswick (Geology), Univ. Western Ontario (Geology):
TEM characterization of K-feldspar rich horizons, Hemlo, Ontario, 1986.

1281. WILLIAMS, H.R., Ontario Geol. Surv.:
Studies in the Britt Domain, Grenville Province, Ontario, 1982-.

Writing up of structural geology, petrology and geochemistry in progress.

1282. WILLIAMS, H.R., BUCK, S., REILLY, B.A., SOO, K.Y., Ontario Geol. Surv.:
Structural studies in the Beardmore-Geraldton Belt and Quetico Subprovince, Ontario,

1984-; M.Sc. theses (Buck, Reilly, Soo).

Project develops an accretionary prism model for the Quetico Subprovince.

1283. WILLIAMS, H.R., CULVER, S.J., Ontario Geol. Surv.:
Terrane analysis of Sierra Leona, 1973-.

See:

Structural terranes in Sierra Leone; J. African Earth Sci., 1987.

1284. WILSON, B.C., DIXON, J.M., HELMSTAEDT, H., Queen's Univ. (Geological Sciences):
Fracture controlled gold mineralization in the Red Lake greenstone belt, Ontario; Fracture, flow and the effect of fluids, 1982-87; Ph.D. thesis (Wilson).

QUÉBEC

1285. BARAGAR, W.R.A., Geol. Surv. Can.:
The tectonics of Archean and Proterozoic gneisses bordering the Ungava Trough, Québec, 1985-.

1286. BÉLAND, J., GOUTIER, J., Université de Montréal (Géologie):
Structure et stratigraphie du Groupe de Trinité des Monts de la culmination de Témiscouata-Rimouski, Québec; thèse de maîtrise (Goutier).

Assemblages lithotectoniques reconnus en partie limités par des mélanges (type wild flysch). Localités fossilifères nouvelles révèlent âges cambrien inférieur et moyen. Failles de chevauchement et failles de décrochement. Tectonisation intense propre à une mise en place par chevauchement.

1287. BÉLAND, J., PERRAULT, G., GIGUÈRE, C., Université de Montréal (Géologie), École Polytechnique (Génie minéral):
La minéralisation aurifère de la mine Sigma II, Abitibi, Québec, 1986-87; M.Sc.A. thesis (Giguère).

Étude du mode de fracturation à l'origine de veines de quartz aurifères contenues dans un filon de granophyre (Mine Sigma II) et étude de la minéralisation aurifère.

1288. BÉLAND, J., PERRAULT, G., SAVOIE, A., Université de Montréal (Géologie), École Polytechnique (Génie minéral):
Gîtologie de la mine Doyon, Abitibi, Québec, 1983-87; thèse de doctorat (Savoie).

Étude du mode de fracturation à l'origine de veines aurifères dans une zone de cisaillement traversant diverses lithologies du Groupe de Blake River. Déformation "transpressive". Cartographie détaillée de veins en surface (décapage) et sous-terre.

1289. BUDKEWITSCH, P., ROBIN, P.-Y., LAMOTHE, D., Université de Toronto (Géologie), Ministère de l'Énergie et des Ressources du Québec:
Étude structurale, région du lac Chukotat, Nouveau-Québec, 1986-88; thèse de maîtrise (Budkewitsch).

See:

Some preliminary observations on the structural style in a part of the Ungava Trough, New-Québec; Ministère de l'Énergie et des Ressources du Québec, DV 86-16, p. 45-50, 1986.

Reconnaissance géologique et évaluation préliminaire du potentiel minéral de la Fosse de l'Ungava (ceinture de Cap-Smith). Ce travail fait partie d'un projet à long terme qui a débuté en 1983.

1290. GOULET, N., BÉLANGER, M., Université du Québec à Montrél (Géologie), Ministère de l'Énergie et des Ressources du Québec:
Synthèse tectonique de la partie nord de la Fosse du Labrador, Québec, 1984-87.

Voir:

Étude tectonique et stratigraphique de la partie nord de la Fosse du Labrador — région de la Baie aux Feuilles et du lac Bérard; Ministère de l'Énergie et des Ressources du Québec, MB 86-27, 1986.

Une compréhension de l'évolution tectonique et stratigraphique de la partie nord de la Fosse du Labrador.

1291. MARTIGNOLE, J., INDARÈS, A., Université de Montréal (Géologie):
Le Supergroupe de Wakeham, Québec, 1985-88; thèse de maîtrise (Indarès).

Étude stratigraphique et tectonique du Supergroupe de Wakeham (Province de Grenville). Relation avec la sousbassement et avec le massif anorthositique de Havre St-Pierre.

1292. MARTIGNOLE, J., INDARÈS, A., Université de Montréal (Géologie), IREM:
Cartographie et tectonique du Supergroupe de Wakeham, Province de Grenville, Québec, 1986-87.

1293. ST-ONGE, M.R., Geol. Surv. Can.:
Cape Smith Fold-Thrust Belt, east end, Quebec, 1985-.

See:

Tectono-stratigraphy and structure of the Lac Watts-Lac Cross-Rivière Déception area, central Cape Smith Belt, northern Québec; Geol. Surv. Can., Paper 87-1A, p. 619-632, 1987.

1294. VAN DER LEEDEN, J., BÉLANGER, M., Ministère de l'Énergie et des Ressources du Québec:
Synthèse structurale, région de la rivière George, Québec, 1985-88.

Ce travail vise une compréhension de l'évolution structurale de la région. Il fait partie d'un projet à long terme qui a débuté en 1983 et qui a comme objectif une reconnaissance géologique et une évaluation du potentiel minéral du territoire à l'est de la Fosse du Labrador.

1295. WHITE, J.C., Univ. New Brunswick (Geology):
TEM study of shock deformation features, Manicouagen, Quebec, 1987.

YUKON TERRITORY/ TERRITOIRE DU YUKON

1296. GODWIN, C.I., LANE, R., THOMPSON, R., Univ. British Columbia (Geological Sciences), Geol. Surv. Can.:
Geology of breccias, Coal Creek Dome, northwestern Yukon, 1986-88; M.Sc. thesis (Lane).

Nature of major contacts, and sedimentary versus diatreme nature of hematitic breccia are being investigated. More detailed than 1:50,000 mapping.

1297. TEMPELMAN-KLUIT, D.J., Geol. Surv. Can.:
Stratigraphy, structure and metallogeny of Pelly Mountains, and Yukon Plateau, Yukon Territority, 1973-.

GENERAL/GÉNÉRALITÉS

1298. DIXON, J.M., Queen's Univ. (Geological Sciences):
Centrifuge modelling of foreland folding, 1984-88.

1299. KING, L.H., Geol. Surv. Can.:
Bedrock and surficial geology, Grand Banks, 1973-.

1300. LIU, S., DIXON, J.M., Queen's Univ. (Geological Sciences):
Centrifuge modelling of thrust-fault propagation and formation of thrust ramps, 1986-89; Ph.D. thesis (Liu).

1301. MAITLAND, W., WHITE, J.C., Univ. New Brunswick (Geology):
Subsolidus phenomena in deep-crustal deformation pyroxenes, 1985-87; M.Sc. thesis (Maitland).

1302. **ROHR, K.**, Geol. Surv. Can.:
The structure of the Earth in Western Canada.

1303. **SOUTHER, J.G.**, Geol. Surv. Can.:
Study of the Cenozoic evolution of the western Cordillera, 1977-.

1304. **SRIVASTAVA, S.P.**, Geol. Surv. Can.:
Comparative studies of the continental margins of the Labrador Sea and of the North Atlantic, 1978-.

1305. **STOCKMAL, G.**, Geol. Surv. Can.:
Regional geologic and plate tectonics history of the Canadian Appalachians, 1985-.

1306. **STRINGER, P.**, Univ. New Brunswick (Geology):
Relations of cleavage to folding in the Appalachian-Caledonian orogenic belt, 1975-87.

1307. **SWEENEY, J.**, Geol. Surv. Can.:
Cordilleran structure and tectonic evolution.

1308. **TSIKOS, G.**, **DIXON, J.M.**, Queen's Univ. (Geological Sciences):
Fracture analysis and scale modelling in a centrifugally induced diapiric (3-d) strain field, 1982-87; M.Sc. thesis (Tsikos).

1309. **WHITE, J.C.**, **TREMBLAY, L.**, Univ. New Brunswick (Geology):
Deep-crustal deformation with continental megathrusts; M.Sc. thesis (Tremblay).

See:

Extreme ductility of feldspars from a mylonite, Parry Sound, Ontario; J. Structural Geol., vol. 8, p. 133-143, 1986.

VOLCANOLOGY/VOLCANOLOGIE

1310. **BAILEY, G.**,
HELMSTEAD, H., Queen's Univ. (Geological Sciences):
Kam/Banting transition, 1987-; M.Sc. thesis (Bailey).

Completion of a study of the transition from the Kam Group to the Banting Group and the relation of the Jackson Lake Formation to these groups.

1311. **BOSTOCK, H.H.**, Geol. Surv. Can.:
Volcanic rocks of the Appalachian region, 1973-.

1312. **EASTON, R.M.**, Ontario Geol. Surv.:
Volcanic synthesis of the central metasedimentary belt, Grenville Structural Province, Ontario, 1987-92.

Long-term study to provide a synthesis on the paleoenvironment, nature of volcanic edifices, and geochemical characteristics of volcanic rocks in the central metasedimentary belt, in conjunction with detailed mapping of volcanic rocks within the belt.

1313. **HAMILTON, T.S.**, Geol. Surv. Can.:
Volcanic rocks of the Insular Belt and adjacent deep ocean, British Columbia, 1982-.

1314. **JACKSON, V.A.**, **BAILEY, G.**, **BELL, R.H.**, **HOWSON, S.H.**, **KERR, D.E.**, Indian Affairs and Northern Development (NAP) Canada:
Hood River 75L/9, 10, 15, 16, N.W.T.

See:

The southern extension of the High Lake volcanic belt, NWT; DIAND, EGS 1986-14.

1315. **JOLLY, W.T.**, Brock University (Geological Sciences):
1) Huronian magmatism in Ontario, 1980-; 2) Archean volcanics of Leonora area, western Australia, 1986-; and 3) Shoshonites of Puerto Rico, 1970-.

See:

Lithophile elements in Huronian lavas, and evolution of Precambrian mantle; Earth Planet. Sci. letters, 1987.

1316. **KOLISNIK, A.M.E.**,
PEARCE, T.H., Queen's Univ. (Geological Sciences):
Laser Interference and Nomarsky studies of zoned volcanic phenocrysts, Volcan Popocatépetl, Mexico, 1985-87; M.Sc. thesis (Kolisnik).

See:

Zoned phenocrysts from Volcan Popocatépetl, Trans-Mexican volcanic belt: Laser interferometric studies; Geol. Assoc. Can. – Mineral. Assoc. Can., Annual Meeting, Program with abstracts, vol. 12, p. 63, 1987.

Magmatic crystal stratigraphy and constraints on magma chamber dynamics: laser interference and Nomarsky results; Hawaii Symp. on How Volcanoes Work, Hilo, Hawaii, 1987.

Zoned volcanic phenocrysts from Volcan Popocatépetl andesitic to dacitic lavas reveal disequilibrium textures consistent with repeated magma mixing events prior to eruption. Complex zoning details observed in laser-interference profiles and Nomarsky images provide us with a record of the history of magmatic processes affecting individual crystals.

1317. **MATHEWS, W.H.**,
HICKSON, C.J., Univ. British Columbia (Geological Sciences):
Late Cenozoic volcanic rocks in southern British Columbia, their ages, compositions, geomorphology and significance in terms of neotectonics, 1983-.

See:

An Early Pleistocene proglacial succession in south-central British Columbia; Can. J. Earth Sci., vol. 23, p. 1796-1803, 1986.

1318. **MOORE, J.M.**,
BARTLETT, J.R.,
HARNOIS, L.,
MORTON, R.L., Carleton Univ. (Geology):
Volcanic rocks of the Grenville Supergroup, Ontario, 1980-88; Ph.D. thesis (Harnois).

See:

Geology of the Marble Lake area; Ontario Geol. Surv., Rept. 238, 1986.

Physical volcanology, stratigraphy and petrochemistry of metavolcanic rocks of CA. 1.3-1.2 GA age, in the Central Metasedimentary Belt, are being documented and interpreted to yield data on tectonic setting and evolution.

1319. **PELLETIER, K.**, **MOORE, J.M.**, Carleton Univ. (Geology):
Ellington Lake 86E/11, N.W.T., 1987-; M.Sc. thesis (Pelletier).

Mapping of a Bear Province supracrustal (mainly volcanic) belt.

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LIST OF GRANT AWARDS IN THE EARTH SCIENCES FOR 1986-87/ LISTE DES SUBVENTIONS ATTRIBUÉES AUX SCIENCES DE LA TERRE EN 1986-87

Department of Energy, Mines and Resources, Research Agreements 1986-87/ Ministère de l'Énergie, des Mines et des Ressources, conventions de recherche 1986-87

BRITISH COLUMBIA

University of British Columbia

Bovis, M.J. (Geography)
Rockslope deformation in the southern Coast Mountains, British Columbia, $8,000.00.Calvert, S.E. (Oceanography) Geochemistry of oceanic ferromanganese deposit, $7,000.00.

Ellis, R.M. (Geophysics and Astronomy)
The 1918 (M 7) and 1957 (M 6) Vancouver Island earthquakes, $5,400.00.

Russell, R.D. (Geophysics and Astronomy)
Development of a fluxgate electrometer for ocean bottom and land-based electric field or magneto-telluric measurements, $7,500.00.

Strangway, D.W. (Geophysics and Astronomy)
High resolution crustal magnetization map of southern part of Vancouver Island, $19,000.00.

Watanabe, T. (Geophysics and Astronomy)
One-dimensional magneto-telluric sounding, using a power line, $5,000.00.

Simon Fraser University

Huntley, D.J. (Physics)
Laser dating of sediments, $7,500.00.

Poiker, T.K. (Geography)
Modelling of topographic surfaces, $9,000.00.

Roberts, M.C. (Geography)
The internal architecture of the Fraser Delta, $6,900.00.

ALBERTA

University of Alberta

Burwash, R.A. (Geology)
Western Canada Basin heat generation data base, $5,500.00.

Chamberlain, V.E. (Geology)
Age dating of paleomagnetically analysed early Proterozoic rocks of the Slave Province, $3,500.00.

Chatterton, B.D.E. (Geology)
Conodont biostratigraphy and paleoecology of the Famennian Palliser Formation and subsurface equivalents, Alberta and British Columbia, $5,500.00.

Cruden, D.M. (Geology)
Geotechnical characterization of materials in slope movements in the Cordillera, $8,000.00.

Nesbitt, B.E. (Geology)
Evaluation of the origin of mesothermal gold-quartz veins of the Canadian Cordillera, $7,000.00.

Pemberton, S.G. (Geology)
Ichnology of the Precambrian-Cambrian boundary: The Miette -Gog transition Mount Robson area, $6,000.00.

University of Calgary

Cook, F.A. (Geology and Geophysics)
Enhanced interpretation of lithoprobe southern Canadian Cordillera transect reflection data $18,000.00.

Nakiboglu, S.M. (Survey Engineering)
Thermo-mechanical modelling of sedimentary basins with applications to selected basins in Canada, $6,000.00

Simony, P.S. (Geology and Geophysics)
Tectonics and metamorphism in North Thompson River area, British Columbia, $13,000.00.

Alberta Research Council

Edwards, D. (Alberta Geol. Surv.)
Construction aggregate survey and projection study, $10,000.00.

SASKATCHEWAN

University of Regina

Parslow, G.R. (Geology)
Geology of the Namew Lake (Manitoba) copper-nickel deposit, $6,000.00.

University of Saskatchewan

Caldwell, W.G.E. (Geological Sciences)
Early Cretaceous formaniferal biostratigraphy of northeastern British Columbia, $9,000.00.

Gendzwill, D.J. (Geological Sciences)
Natural and induced seismicity in Saskatchewan, $12,000.00.

Hajnal, Z. (Geological Sciences)
High resolution seismic study of an uranium ore environment $12,000.00.

Saskatchewan Research Council

Hoeve, J.
Rubidium-strontium dating of diabase dikes in the Athabasca Basin, $4,700.00.

MANITOBA

University of Manitoba

Ayres, L.D. (Geological Sciences)
A test of the platinum group element potential of the layered, Proterozoic, Reed Lake Mafic-Ultramafic Complex, $9,000.00.

Cerny, P. (Geological Sciences)
Geochemistry, petrology and exploration criteria for the Yellowknife Pegmatite Field, N.W.T., $8,000.00.

Halden, N.M. (Geological Sciences)
Geochemical and isotopic characterization of the host rocks to the Fox Lake Granite, $4,500.00.

Hall, D.H. (Geological Sciences)
Geoscience research and its effectiveness in influencing technology in the fields of exploration for mineral resources, mining and mineral processing, $9,000.00.

ONTARIO

Brock University

Brand, U. (Geological Sciences)
Petrology, cathode petrography and geochemistry of the Irondequoit Formation, southern Ontario and western New York, $3,050.00.

Carleton University

Bell, K. (Geoscience Studies)
Genesis of the East Kemptville tin deposit and the host Davis Lake monzogranite, southwest Nova Scotia, $7,500.00.

Brown, R.L. (Geology)
The Monashee decollement and its structural relationship to the Valhalla Complex of southeastern British Columbia, $9,200.00.

Csörgö, M. (Mathematics and Statistics)
Quantile processes applied to randomly censored data in the Earth Sciences, $5,000.00.

Lakehead University

Kehlenbeck, M.M. (Geology)
Subprovince margins and boundaries in the eastern Superior Province -structural and stratigraphic relationships, $6,000.00.

Laurentian University

Rousell, D.H. (Geology)
Structural geology of the Grenville Front in the Wanapitei River area, Ontario, $6,500.00.

McMaster University

Clifford, P.M. (Geology)
Petrologic and structural evolution of the rocks in the vicinity of Killarney, Ontario, $7,000.00.

Crocket, J.H. (Geology)
Precious metals in volcanic exhalates from the Juan de Fuca Plate, $8,100.00.

Heidebrecht, A.C. (Engineering)
Site specific earthquake ground motion records and related design base shears for Canadian cities, $8,000.00.

McCann, S.B. (Geography)
Structure and stratification of vegetated coastal dunes, Sable Island, Nova Scotia, $2,600.00.

Middleton, G.V. (Geology)
Hydraulics and sedimentation at tidal inlets and flood tidal deltas, Malpeque Barrier System, Prince Edward Island, $11,100.00.

University of Ottawa

Hattori, K. (Geology)
Geochemical and petrological study of the gold mineralization at Bell Creek, Hoyle Township, Timmins, Ontario, $6,000.00.

Lalonde, A.E. (Geology)
Crust and mantle contributions to the genesis of the collisional Hepburn Batholith of Wopmay Orogen, N.W.T., $4,800.00.

Queen's University

Dalrymple, R.W. (Geological Sciences)
Investigation of storm-dominated sedimentation on the Scotian Shelf and Grand Banks, $4,600.00.

Farrar, E. (Geological Sciences)
Mid-Cretaceous bathozones, Purcel anticlinorium, southeast B.C., and their implications in paleomagnetic-goechronologic studies, $4,000.00.

Schulze, D.J. (Geological Sciences)
An investigation of the petrology and tectonic setting and significance of diatreme breccias and their mantle and basement xenoliths, southeast British Columbia, $3,200.00.

Smol, J.P. (Biology)
Fossil cladoceran assemblages in lake sediment stratigraphies from the Canadian High Arctic, $5,000.00.

Royal Ontario Museum

Wicks, F.J. (Mineralogy and Geology)
The mineralogy and geochemistry of the serpentinized ultramafic bodies of the Manitoba Nickel Belt, $8,500.00.

University of Toronto

Dunlop, D.J. (Geophysics)
Chemical magnetization and remagnetization of sedimentary and metamorphic rocks, $7,950.00.

Eyles, N. (Geology)
Mass movements triggered by glaciation, upper Fraser River, British Columbia, $5,000.00.

Naldrett, A.J. (Geology)
Behaviour of PGE during fractional crystallization and mantle melting and their use as an exploration guide, $10,500.00.

Norris, G. (Geology)
Miocene palynostratigraphy of ODP, Leg 105, Site 645 (Baffin Bay) and Paleogene palynostratigraphy of ODP, Leg 105, Site 647 (Labrador Sea), $8,000.00.

Rucklidge, J.C. (Geology)
Feasibility study for the measurement of iodine isotope 129 for potential dating of hydrocarbon reservoirs, $5,000.00.

Westgate, R. (Geology)
Geochronology and palaeomagnetism of Quaternary basalts and tephra in the Yukon Territory, $5,000.00.

University of Waterloo

Franklin, J.A. (Earth Sciences)
Digital photoanalysis of rock jointing, $10,000.00.

Greenhouse, J.P. (Earth Sciences)
Shallow stratigraphic reflections from ground penetrating radar, $12,000.00.

University of Windsor

Simpson, F. (Geology)
Cross-formational flow of groundwater related to solution-generated collapse (SGC) structures, $6,000.00.

QUÉBEC

École Polytechnique

Chouteau, M. (Génie minéral)
Optimisation de la méthode magnétotellurique (MT) pour la prospection minière, $10,000.00.

Elbrond, J. (Génie minéral)
La dilution et la perte de minerai dans les exploitations minières, $12,500.00.

Université Laval

Filion, F. (Études nordiques)
Analyse dendrochronologique des glissements de terrain de la vallée de la rivière du Gouffre, Charlevoix, Québec, $8,000.00.

McGill University

Doig, R. (Geological Sciences)
Geochronology of granitic rocks of the southern Québec Appalachians, $5,000.00.

Fox, J.S. (Geological Sciences)
Transport and fixation of gold in groundwater, soils and lake sediments: application to mineral exploration, $10,000.00.

Granberg, H.B. (Geography)
Schefferville permafrost research, $5,000.00.

Hynes, A. (Geological Sciences)
Tectonic evolution of the Labrador Trough at 58°N, $8,500.00.

Jensen, O.G. (Geological Sciences)
Geological mapping in tropical terranes by transient AEM (Airborne Electromagnetic) systems, $4,000.00.

Mountjoy, E.W. (Geological Sciences)
Bedrock geology, structure and metamorphism of the footwall of the Purcell Thrust in the western Selwyn Mountains, eastern British Columbia, $7,100.00.

Rowlands, N. (Metallurgical Engineering)
A geotechnical study of Longwall Face Gateroads in the Cape Breton coalfield, $16,000.00.

Université de Montréal

Gray, J.T. (Géographie)
Quaternary studies in the Cap de la Nouvelle-France sector of northern Ungava, $9,000.00.

Hubert, C. (Géologie)
Les grandes failles acadiennes de la Gaspésie: analyse, interprétation et implications géologiques, $5,000.00.

Université du Québec à Montréal

Mareschal, J.-C. (Sciences de la Terre)
Determination of the crustal structure of the northern Labrador Trough by gravity measurements, $6,500.00.

INRS Rimouski

Boczar-Karakiewicz, B. (Océanologie)
Formation of sand ridges on the Continental Shelf by progressive surface waves (with applications to the Scotian Shelf, Sable Island Bank), $6,600.00.

Long, B. (Océanographie)
Étude du cône deltaique marin de la rivière Natashquan: exemple de mise en place et d'evolution d'un placer, $9,000.00.

INRS Ste-Foy

Schrijver, K. (INRS)
Indices de grés plombifères des Appalaches du Québec: Géologie et importance métallogénique, $7,000.00.

NEW BRUNSWICK

University of New Brunswick

Derenyi, E.E. (Surveying Engineering)
Utility of remote sensing imagery for mapping, $5,000.00.

Williams, P.F. (Geology)
Geological mapping in eastern Notre Dame Bay, $4,600.00.

NOVA SCOTIA

CANMAP Research Institute

Akhavi, M.S.
Application of a GIS Analysis System Transfer for Digital Landsat signature extraction and image classification-enhancement in exploration geology, $4,500.00.

Dalhousie University

Bowen, A.J. (Oceanography)
Coastal waves, currents and sediment motion, $7,300.00.

Louden, K.E. (Oceanography)
Arctic heat flow, $8,500.00.

Ogden, J.G. (Biology)
Vegetational and climatic history of Soldier Lake, Halifax Co., N.S., $7,000.00.

NEWFOUNDLAND

Memorial University

Barnes, C.R. (Earth Sciences)
Conodont biostratigraphy, thermal maturation lead-zinc mineralization, Lower Ordovician strata, western Newfoundland, $4,000.00.

Hay, A.E. (Physics)
High frequency acoustic detection of suspended sand, $13,000.00.

Hiscott, R.N. (Earth Sciences)
Identification of source terranes for Lower Paleozoic sandstones of west Newfoundland, $6,000.00.

Hodych, J.P. (Earth Sciences)
Paleomagnetism of Silurian volcanics and red beds of Newfoundland, $4,500.00.

Macpherson, J. (Geography)
Lateglacial and Holocene marine and terrestrial palynostratigraphy, Newfoundland, $16,000.00.

Miller, H.G. (Earth Sciences)
Gravity data acquisition and interpretation, eastern Newfoundland, $4,920.00.

Murthy, G.S. (Earth Sciences)
Paleomagnetic investigations of Paleozoic (and Precambrian) rock formations from the Island of Newfoundland and interpretation of results in terms of tectonics and magneto-stratigraphy, $10,400.00.

Rogerson, R.J. (Earth Sciences)
Glacial geology of the Nachvak Fiord Area, northern Labrador, $2,000.00.

Williams, H. (Earth Sciences)
Geologic map and synthesis of entire Humber Arm Allochthon, $9,500.00.

Wright, J.A. (Earth Sciences)
Seismic measurements across terrane boundaries in Newfoundland, $11,000.00.

Department of Energy, Mines and Resources Contracts Awarded to Canadian Universities 1986-87/ Contracts accordés aux universités canadiennes par le ministère de l'Énergie, des Mines et des Ressources, 1986-87

BRITISH COLUMBIA

University of British Columbia

Arkani-Hamde (Geophysics and Astronomy)
Processing and analysis of east coast marine magnetic data, $15,140.00.

Barnes, M.A. (Geological Sciences)
Organic diagensis in modern, older and ancient environments, $11,942.00.

Bustin, R.M. (Geological Sciences)
Investigation of sedimentary rock maturation profile in northern Yukon and Northwest Territories, $14,998.00.

Ellis, R.M. (Geophysics and Astronomy)
Continuation of the seismographic data collection at selected sites on the west coast of British Columbia, $10,425.00.
Study of the crustal structure in the Peace River Arch area, $21,000.00.

Godwin, C.I. (Geological Sciences)
Lead isotope analyses of galena or comparable Pb-rich samples $5,040.00.

Greenwood, H.J. (Geological Sciences)
Deformation and metamorphism in the Cariboo and Barkerville Terraines, Quesnel Lake and Wells Gray Park regions, British Columbia, $9,981.000.

Mackay, J.R. (Geography)
Study of the development of permafrost and ground ice - Western Arctic coast region - phase II, $54,966.00.

Slaymaker, O. (Geography)
Installation of magnetic displacement system for examination of the dynamics of near-surface materials at selected sites along the Norman Wells to Zama pipeline right-of-way, $4,935.00.

UNIVERSITY OF ALBERTA

University of Alberta

Erdmer, P. (Geology)
Geochronological studies in the northern Long Range, Newfoundland, $21,741.00.

Jones, F.W. (Physics)
Study of existing temperature data from Canadian sedimentary basins, $20,000.00.

Kanasewich, E.R. (Physics)
Reprocessing and preliminary interpretation of selected industry acquired regional seismic reflection data from Melville Island, $25,650.00; $196,000.00.

Rutter, N.W. (Geology)
Geochronological analysis of Beaufort Sea region sediment samples, $57,611.00.

University of Calgary

Coflin, K.C. (Geology and Geophysics)
Data assessment of an on-land program and design of a marine program for deep reflection seismic studies near Inuvik, Northwest Territories, $47,729.00.

Cook, F. (Geology and Geophysics)
Geophysical and geological interpretation of the deep structure of the Aklavik Arch Complex northeast of Inuvik, Northwest Territories, $24,188.00.

Nakiboglu, S.M. (Survey Engineering)
GSP positioning of recorder and shot locations the first epoch strain network observations in support of crustal seismic refraction surveys - Northern Yukon, MacKenzie Delta/Beaufort Sea area, $24,005.00.

Simony, P.S. (Geology)
Structural study along and adjacent to the southern Rocky Mountain trench, British Columbia, $13,802.00.

SASKATCHEWAN

University of Regina

Potter, J. (Energy Research)
Collection and processing of data relating to the petrography mineral matter and trace elements of selected coals in Saskatchewan, $20,000.00.

Watters, B. (Geology)
Investigation of the mafic-ultramafic bodies in the Bassett Lake-Dead Lake area of northern Saskatchewan, $27,003.00.

University of Saskatchewan

Basinger, J.F. (Geological Sciences)
Literature review and report on paleobotanical data as it pertains to the Tertiary of the Arctic Islands, Canada, $6,691.00.

Fowler, C.M.R. (Geological Sciences)
Digitization of seismic records, Hudson Bay Experiment 1965, $6,000.00.

Hajnal, Z. (Geological Sciences)
Great Lakes seismic refraction survey - onshore recording, $25,447.00.
Interpretation of crustal structure in the Peace River Arch area from seismic refraction studies, $21,000.00.

Kyser, T.K. (Geology)
Study of Nd-Sm and RD-Sr isotopic analyses of rock and mineral samples from Saskatchewan and Manitoba, $20,019.00.

MANITOBA

University of Manitoba

Anderson, D. (Geological Sciences)
Study of the mineralization deposits in Lynn Lake, Northern Manitoba, $11,000.00.

Brisbin, W.C., Halden, N.M. (Geological Sciences)
Characterization of the precious metal mineralization and geochemical variability of the Falcon Lake igneous complex, southeastern Manitoba, $18,161.00.

Hawthorne, F.C. (Geological Sciences)
Mineralogical study of garnet-anthophyllite rocks from the Sherridon area, Manitoba, $20,000.00.
Mineralogical study of garnet and anthophyllite rocks from the Sherridon area, Manitoba, $17,500.00.

ONTARIO

Carleton University

Bell, K. (Geology)

Development of a method for using the Nd/Sm isotopic method to determine the age of gold mineralization in the Canadian Shield - phase I, $29,559.00.

Blenkinsop, J. (Geology)
Lead isotope analyses of galena or comparable Pb-rich samples and lead isotope analyses of pyrite or comparable low-Pb sulphides, $9,637.00.

Michel, F. (Geology)
Isotopic analysis and environmental interpretation of Arctic ice samples, $935.00.

Raffler, A.A. (Science Technology Centre)
Engineering and construction of mechanical and electronic equipment for remote sensing applications for laboratory and airborne use - continuation, $25,000.00.

Smith, M.W., Patterson, D.E. (Geotechnical Science)
Study of core samples using time domain reflectometry techniques, $9,990.00.

Watkinson, D.H. (Geology)
Investigation of the geological controls on the distribution and genesis of chromite and platinum group elements in selected parts of the Bay of Islands Ophiolite complex, Newfoundland, $15,000.00.

University of Ottawa

Fowler, A.D. (Geology)
Mineral resource potential of Howse Lake and Dyke Lake areas in Labrador, $11,500.00.

Veizer, J. (Geology)
Analysis of geochemical samples for isotope data, $70,000.00
Determination of the paleoenvironment and geochemistry of carbonate shells, $13,977.00.

McMaster University

Clifford, P.M. (Geology)
Study of shear zones in southwestern Newfoundland, $4,939.00.

McNutt, R.H. (Geology)
Analyses of 87Sr/86Sr values of groundwaters and minerals of the enclosing rock, Atikokon, Ontario, $14,920.00.

Queen's University

Mason, R. (Geological Sciences)
Geological investigations of the McIntyre-Hollinger-Coniaurum Complex at Timmins, Ontario - Phase II, $70,000.00.

University of Toronto

Blake, W. (Physics)
Isotopic analyses of organic samples, $20,000.00.

Cormack, D.E. (Systems Design)
Numerical simulation of steam injection in bitumen and heavy oil reservoirs - phase II, $73,017.00.

Keiser, W.E. (Physics)
Radiocarbon dating of shell and organic matter samples, $5,650.00.

Naldrett, A.J. (Geology)
Isotopic trace element and metallogenic studies of the Nipissing Diabase, Sudbury-Cobalt region, $49,526.00.

Robin, P.R.F. (Geology)
Structural studies in the Thompson Belt, Manitoba, $19,950.00.

Scott, S.D. (Geology)
Petrological and geochemical characteristics of alteration at Lyon Lake creek zone and Sturgeon Lake mines, $12,000.00.

Yen, J.L. (Electrical Engineering)
Proof of concept verification of the Canadian Geophysical Long Baseline Interferometry System, $44,310.00.

University of Waterloo

Fritz, P. (Earth Sciences)
Isotopic analyses of organic samples, $6,000.00.

University of Western Ontario

Bancroft, G.M. (Chemistry)
Characterization of fossil fuels, their residues and refinery related solid materials using synchroton radiation techniques, $25,000.00.

Beck A.E. (Geophysics)
Borehole temperature measurements, Kapuskasing structure/Abitibi greenstone belt, $5,444.00.

Kerrich, F. (Geology)
Study of oxygen isotopes and fluid inclusion on Lac du Bonnet pluton and Folson Lake Fault palladium, $12,500.00.

King, R.H. (Geography)
Microprobe analyses of glass shards and/or heavy minerals separated from three samples of Tephra, $742.00.

Mereu, R.F. (Geophysics)
Great Lakes seismic refraction survey - onshore recording, $18,236.00.

York University

Nicholls, R.W. (Space Science)
Study of the shock combustion of aromatic and napthalenic hydrocarbons in jet fuels derived from the Canadian Oil Sands, $29,500.00.

QUÉBEC

École Polytechnique

David, M. (Mineral Engineering)
3-D modelling of reservoir -- rock properties at the Crystal Viking Field, Alberta, using non-stationary conditional simulations, $24,520.00.

Kennedy, G. (Énergétique)
Rock sample analysis, $1,360.00.

Laval University

Chagnon, J.-Y. (Geology)
Operation of the CQC seismographic station, $2,776.00.

McGill University

Mountjoy, E.W. (Geological Sciences)
Map compilation of Cardinal River sheet (83C/151), Alberta, $25,108.00.

Université du Québec à Montréal

Gariépy, C. (Geotop Labratory)
Determine the provenance, mode of formation and post-Tectonic history of the Lower Tetagouche Group, $80,600.00.

Université de Sherbrooke

Granberg, H. (Géographie)
Modelling Shefferville permafrost - phase III, $19,900.00.

NEW BRUNSWICK

University of New Brunswick

Kleusberg, A. (Geodetic Research)
Analysis of GPS data collected during the Juan de Fuca Survey, 1986, $6,203.00.

Mersereau, W. (Computing Centre)
Data bank on eastern coals from Nova Scotia and New Brunswick, $2,000.00.

Williams, P.F. (Geology)
Study of the structure and diagenesis of the Albert Formation, $45,840.00.

NOVA SCOTIA

Acadia University

Barr, S.M. (Geology)
Study of the Point Wolfe River pluton and surrounding rocks of the Caledonia Highlands, $15,000.00.
Geology, petrology and age of the Point Wolfe River pluton and associated rocks, Caledonian Highlands, New Brunswick - phase II, $20,500.00.

Raeside, R. (Geology)
Petrology of gneisses in the vicinity of the Lime Hill zinc showing, Inverness County, Nova Scotia, $1,133.00.

Van Waggoner, N. (Geology)
Study of the physical volcanology of Siluro-Devonian volcanic rocks in the Passamaquoddy Bay area, $12,840.00.
Quantitative analysis of bedforms, macrobenthos and trace fossil distribution on the Canadian Polar Margin, $3,500.00.

Dalhousie University

Beaumont, C. (Oceanography)
Investigation of the thermal and subsidence history, Alberta Basin Transect, $10,500.00.

Boyd, R. (Centre for Marine Geology)
Extension of Holocene-Pleistocene foram biostratigraphy of northeast Newfoundland Shelf on cores from B10 Cruise 83-033, $4,310.00.

Gibling, M. (Geology)
Update and expansion of well information data base, $5,200.00.
Update and expansion of well information data base - WELLSYS, $3,200.00.
Micropalaeontology and bibliography for Economic Geology of Canada, $2,924.00.

Mayer, L. (Oceanography)
Development of microcomputer-based processing of chirp sonar data, $3,000.00.
Measurement of acoustic compressional wave velocity on piston core samples from the Emerald Basin, $5,000.00.

Muecke, G. (Geology)
Study of select Mesozoic igneous rocks of northwestern Ellesmere Island, $60,013.00.

Ogden, G. (Biology)
Preparation of pollen samples, $1,468.00.

Ryall, P.J. (Geology)
Sedimentology of MacKenzie River distributary outh environments, $14,000.00.

Scott, D.B. (Centre for Marine Geology)
Stable isotope analysis of Foraminifera from Hudson Strait, $1,746.00.

St. Mary's University

Piper, G. (Geology)
Petrological studies of the Jeffers Formation, Cobequid Highlands, Nova Scotia, $15,000.00.

Waldron, J. (Geology)
Sedimentology of the middle Meguma Group, Mahone Bay area, Nova Scotia, $17,000.00.

Technical University of Nova Scotia

Adorjan, L.A. (Mining and Metallurgy)
Pine Brook barite, Cape Breton, Nova Scotia, $50,009.00.

NEWFOUNDLAND

Memorial Univeristy

Calon, T.J., Malpas, J.G. (Earth Sciences)
Determination of the geological structure and deformational history of selected areas containing chromite deposits in the Bay of Islands Ophiolite, $54,893.00.

Guigne, J. (C-Core)
Correlation of acoustic and geotechnical properties of a saline illite clay sediment using the acoustic drill technology, $68,000.00.

Jenner, G.A. (Earth Sciences)
Study of geology, geochemistry and metallogeny of the Catchers Pond and Western Arms groups, Newfoundland, $44,966.00.

Jenner, G.A., Fryer, B.J. (Earth Sciences)
Sample prepartion for Nd/Sm isotopic analyses, $6,038.00.

Pereira, C. (Earth Sciences)
Quaternary marine geology and sedimentation styles on the continental margin of Antarctica, $10,038.00.

Rivers, T., Calon, T.J. (Earth Sciences)
Study of structural and economic geology in the area of Bruce Lake, Labrador, $13,907.00.

Rogerson, R.J., Burden, E., Macpherson, J.B. (Earth Sciences)
Analysis of the pollen, dinoflagellates and stratigraphy of sediment cores taken from lakes in the Torngat Mountains of northern Labrador, $13,489.00.

Stavely, N. (Arts)
Study of the effects of the Grand Banks earthquake in Newfoundland, $4,037.00.

Whittick, J. (C-Core)
Formation of the late Tertiary and Quaternary sediments of the northeastern Grand Banks of Newfoundland based on earlier sampling, $29,899.00.

Wilton, D.H.C. (Earth Sciences)
Study of the metallogeny of the central Labrador mineral belt, phase II, $82,295.00.

Polar Continental Shelf Project Field Support Non-Governmental Activities 1986-87/ Plateau continental polarie en faveur d'activités non gouvernementales pour 1986-87

ALBERTA

Alberta Research Council

Richardson, R.J.H.
Sedimentology, Ellesmere Island, District of Franklin.

Alberta University

England, J.
Quaternary glaciation, northern Ellesmere Island, District of Franklin.

Smith, D.G.W.
Meteorites, Barnes and Devon Ice Caps.

SASKATCHEWAN

Saskatchewan University

Basinger, J.
Paleobotany, Strand Fiord, Fosheim Peninsula.

Edwards, G.R.
Precambrian geology, Alexandra Fiord, Axel Heiberg Island, District of Franklin.

Renaut, R.
Sulphurous springs, Expedition Fiord.

ONTARIO

Carleton University

Michel, F.A.
Ground ice, Mackenzie Delta and Herschel Island.

Laurentian University

Copper P.
Paleontology, Southampton Island, District of Keewatin.

McMaster University

McCann, S.B.
Geomorphology and sedimentology, Ellesmere Island, District of Franklin.

Ottawa University

Dixon, O.A.
Sedimentology and stratigraphy, Devon and Cornwallis Islands, District of Franklin.

French, H.M.
Permafrost, Mackenzie Delta, Barn Mountains, Sacks Harbour.

Kerr, D.E.
Stratigraphy and sedimentology, Coppermine, Coronation Gulf.

Toronto University

Edwards, R.N.
Electromagnetics, Beaufort Sea.

Halls, H.
Paleomagnetics, Amund Ringnes Island, Tanquary Fiord, Buchanan Lake.

Lewkowicz, A.G.
Permafrost, southeast Melville Island, District of Franklin.

Ritchie, J.C.
Lake sediments, Mackenzie Delta, Yukon coastal area.

Schwerdtner, W.M.
Stratigraphy, northwestern Ellesmere Island, District of Franklin.

Western Ontario University

Rainbird, R.H.
Stratigraphy and sedimentology, Victoria Island.

Windsor University

Krawetz, M.T.
Sedimentology, Alexandra Fiord, Cape Herschel

NOVA SCOTIA

Dalhousie University

Muecke, G.K.
Volcanics, northwestern Ellesmere and Axel Heiberg Islands, District of Franklin.

NEWFOUNDLAND

Memorial University of Newfoundland

Burden, E.
Biostratigraphy, Baffin Island; Palynology, Scott Inlet.

U.S.A.

Massachusetts University

Bradley, R.
Sedimentology, northern Ellesmere Island, District of Franklin.

Perdue University

Zinsmeister, W.J.
Paleontology, Fosheim Peninsula, Strand Fiord, Bylot Island.

Ontario Geological Survey, Geoscience Research Grants, 1986-87/ Commission géologique de l'Ontario subventions de recherche en sciences de la terre pour 1986-87

Brock University

Williams, H.R.,
Structural studies of shear zones in the Quetico and Wabigoon Subprovinces, $19,900.00.

Lakehead University

Kissin, S.A.
Genesis of pegmatites in the Quetico Gneiss Belt of northwestern Ontario, $10,995.00.

The genesis of silver vein deposits in the Thunder Bay area, $10,930.00.

Laurentian University

Whitehead, R.E., Beswick, T.
Remote sensing and geobotany as an aid to mineral exploration in northern terrane, $23,150.00.

McMaster University

Crockett, J.H.
A lead isotope study of gold mineralization in the Dome Mine quartz-fuchsite vein environment, $10,000.00.

Risk, M.J.
Sedimentology of the Long Rapids Formation, $3,000.00.

Queen's University

Helmsteadt, H., Hodgson, C.J.
The structural and lithological environment of the Kirkland - Larder Lakes Break and associated gold mineralization, $43,700.00.

Mason, R.,
Geological setting of gold deposits in the Timmins Mining Camp, $23,420.00.

Nichol, I., Shaw, J.
Quaternary geology and geochemical exploration in the Matheson area, $16,680.00.

Smith, L.
Karst episodes and permability development, Silurian reef reservoirs, southwestern Ontario, $12,483.00.

Toronto University

Bailey, R.C.
Improved computer interpretation of gravity and magnetic data, $16,000.00.

Naldrett, A.J.
Petrologic, chemical, isotopic and economic potential studies of the Nipissing Diabase, $21,350.00.

Rucklidge, J.C.
The role of carbonaceous materials in precious metal deposits, $22,600.00.

Schwerdtner, W.M.
Deformation of the Sudbury structure and its footwall, $19,000.00.

Spooner, E.T.C.
Quartz vein related gold-tungsten and monzonite hosted copper-gold mineralization, Hollinger (Timmins) and McIntyre (Schumacher) Mines, $23,363.00.
Controls on unusual gneissic tonalite/trondhjemite hosted gold mineralization, Renabie Mine, Missanabie, $13,025.00.

York, D.
Dating of Ontario's gold deposits, $35,636.00.

Western Ontario University

Edgar, A.D.
The geochemical origin and economic potential of platinum group element bearing rocks of the Lac des Iles intrusion, $9,325.00.

Fyfe, W.S.
Metal accumulation in microorganisms with emphasis on uranium, gold, silver, copper, zinc and iron, $36,648.00.

Hicock, S.R.
Anomalous carbonate till, Hemlo area: origin and applications, $26,500.00.

Palmer, H.C.
Paleomagnetism and rock magnetism of the Mulcahy Lake and Lac des Iles gabbros, $14,189.00.

Waterloo University

Dusseault, M.D.
Exploration for buried granular aggregates by remote sensing techniques, $37,350.00.

Frape, S.K.
Geochemical studies of Formation waters, Paleozoic strata, southwestern Ontario, $22,816.00.

Natural Sciences and Engineering Research Council Canada Strategic Grants 1986-87/ Subventions thématiques données par le Counseil de recherches en sciences naturelles et en génie du Canada 1986-87

ALBERTA

University of Calgary

Costerton, J.W. (Biology)
Development of a battery of formation - plugging bacterial spores to enhance primary and secondary oil recovery, $210,000.00.

BRITISH COLUMBIA

University of British Columbia

Pond, G.S. (Oceanography)
Numerical modeling and measurement of the circulation in British Columbia fiords, $234,283.00.

ONTARIO

McMaster University

Crocket, J.H. (Geology)
Potential of uraniferous conglomerates at Elliot Lake, Ontario, for by-productplatinum group minerals recovery, $33,000.00.

Walker, R.G. (Geology)
Origin of reservoir sandstones and conglomerates, Alberta, $159,150,00.

Queen's University

Kamphuis, J.W. (Civil Engineering)
Hydraulic model research on physics of sediment transport by waves, $161,680.00.

Smol, J.P. (Biology)
Paleolimnological investigations of pH and metal influences on Sudbury area lakes, $88,000.00

University of Toronto

Greenwood, B. (Geography, Geology), Bowen, A.J. (Dalhousie, Oceanography)Nearshore sediment transport, $296,070.00.

Scott, S.D. (Geology), Chase, R.L. (British Columbia, Geological Sciences)
Tectonics, sulfides and robots in the Canadian Pacific, $385,000.00.

Spooner, E.T.C. (Geology)
Archean gold-quartz vein ore deposits: testing a complete genetic solution and exploration lithogeochemistry, $225,000.00.

University of Waterloo

Fritz, P., Frape, S.K. (Earth Sciences), Welham, J.A., Macko, S.A. (Memorial, Earth Sciences).
Isotope geochemistry of hydrocarbons in crystalline rocks, $114,500.00.

Warner, B.G., Fritz, P. (Earth Sciences)
Paleobiological and environmental isotope investigations of peat deposits in Ontario, $80,000.00.

NEW BRUNSWICK

University of New Brunswick

Steward, F.R., Karman, D. (Chemical Engineering)
Combustion and retorting properties of New Brunswick oil shale, $62,710.00.

NEWFOUNDLAND

Memorial University of Newfoundland

Hay. A.E. (Physics), Bowen, A.J. (Dalhousie, Oceanography)
RASTRAN: Remote acoustic sediment transport measurement, $311,500.00.

NOVA SCOTIA

Dalhousie University

Beaumont, C., Zentilli, M., Reynolds, P. (Oceanography, Geology)
Geodynamics and thermal evolution of rifted margins and their flanks, $189,920.00.

NAME DEPARTMENT UNIVERSITY UNIQ#/APPL#/GR#	1986-87
Achab,A. INRS-Géoress. Québec - INRS	Chitinozoaires du paléozoique du Québec
Agterberg,F.P. Geology Ottawa	Development of mathematical models for stratigraphic correlation
Aldridge,K.D. Earth & Atmos. Sc. York	Laboratory studies in geophysical fluid dynamics
Allard,M. Géographie Laval	Quaternaire et pergélisol littoral à la baie d'Ungava, Québec nordique
Anderson,G.M. Geology Toronto	Metasomatic and ore-forming solutions
Archambault,G. Sc. appliquées Québec-Chicoutimi	Etudes géomécaniques et analyse structurale des zones et ceintures de cisaillement (shear zones and shear belts) de la région de Chibougamau, Québec
Armstrong,R.L. Geological Sciences British Columbia	Cordilleran geochronometry, radiogenic isotopes, and petrology
Ayres,L.D. Earth Sciences Manitoba	Volcanological investigations of the Proterozoic Flin Flon volcano, Manitoba and Saskatchewan
Baadsgaard,H. Geology Alberta	Isotope geology of: selected crustal areas, time-scale horizons, uranium mineralisation and potash salt deposition
Bachinski,S.L.W. Geology New Brunswick	Nature, origin, and evolution of minettes, other lamprophyres, and lamproites
Bailey,R.C. Physics/Geology Toronto	Inverse and theoretical methods in geophysics
Bailey,W.G. Geography Simon Fraser	Measurement and modelling of energy balance regimes
Barendregt,R.W. Geography Lethbridge	Paleomagnetic investigation of quaternary deposits in the Western Canadian Prairies and the Western Canadian Arctic
Barker,J.F. Earth Sciences Waterloo	Aspects of biogeochemistry of groundwaters
Barnes,C.R. Earth Sciences Memorial	Lower Paleozoic conodonts, Ordovician chronostratigraphy, and thermal maturation studies
Barr,S.M. Geology Acadia	Petrology, petrogenesis, and economic aspects of igneous rocks from Nova Scotia, New Brunswick, and Thailand
Barrett,T.J. Geology Toronto	Formation of Fe-, Zn- and Pb-rich metal deposits (on-land & deep sea)
Barrett,T.J. Geological Sciences McGill	Formation of Fe-, Zn, and Pb-rich metal deposits (on-land and deep sea)
Basinger,J.F. Geological Sciences Saskatchewan	Fossil plants of Western and Northern Canada
Bayliss,P. Geology & Geophys. Calgary	Applied crystallographic-mineralogy
Beaumont,C. Oceanography Dalhousie	Geodynamics of sedimentary basins and mountain belts
Beck,A.E. Geophysics Western Ontario	Geothermal problems, pure and applied
Bell,K. Geology Carleton	Isotope geochemistry of carbonatites and the sub-continental upper mantle
Bello,R.L. Geography York	Experimental modelling of lake evaporation
Bergeron,M. INRS-Géoress. Québec - INRS	Le comportement de l'or dans les zones d'altération chimique superficielle: les mécanismes de fixation
Binda,P.L. Geology Regina	1) Stratiform copper occurrences of the Belt in Alberta and British Columbia 2) Depositional environment of the Battle Formation in Saskatchewan
Boczar-Karakiewic,B. INRS-Océanolog. Québec - INRS	Interaction of shallow-water waves and bottom topography
Bonn,F.J. Géographie Sherbrooke	Télédétection des propriétés thermiques de la surface de la terre
Borradaile,G.J. Geology Lakehead	Field and experimental structural geology, with reference to the shield
Bouchard,M. Géographie Québec-Montréal	Caractéristiques des altérations, SE du Bouclier et SW des Appalaches
Bouchard,M.A. Géologie Montréal	Sédimentologie et composition des sédiments glaciaires sur le Bouclier Canadien à l'est de la Baie d'Hudson
Bovis,M.J. Geography British Columbia	Slope movement in southwest British Columbia
Bowen,A.J. Oceanography Dalhousie	Dynamics of waves, currents and sediments
Boyd,R. Geology Dalhousie	Coastal and continental shelf sedimentation
Brand,U. Geological Sciences Brock	Biogeochemistry of molluscs and geochemical paleo-oceanography
Brookes,I.A. Geography York	Geomorphology and quaternary geology of Dakhla Oasis Region, Egypt

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Brookfield,M.E. Land Resource Sc Guelph	Studies of recent and ancient desert deposits
Brooks,C. Geology Montréal	Isotopic and chemical studies of early crustal processes in the Precambrian Shield of Canada
Brown,A.C. Génie minéral Ecole Polytechnique	Etude métallogénique des gisements stratiformes de métaux non-ferreux. Métallogenic studies of stratiform non-ferrous metal deposits
Brown,R.J. Geology & Geophys. Calgary	Electromagnetic coupling in multifrequency IP
Brown,R.L. Geology Carleton	Structural and tectonic investigations in the Canadian Cordillera
Bryan,R.B. Geography Toronto	Rill initiation, gully development and drainage basin processes in semi-arid environments
Burden,E.T. Earth Sciences Memorial	Mesozoic and Cenozoic palynology of the North Atlantic borderlands
Bustin,R.M. Geological Sciences British Columbia	Structure, sedimentology, and petrology of coal measures in Western and Arctic Canada
Buttle,J.M. Geography Trent	Monitoring hillslope soil moisture fluxes
Caldwell,W.G.E. Geological Sciences Saskatchewan	Biostratigraphic studies in the cretaceous system of western Canada
Calvert,S.E. Oceanography British Columbia	Geochemistry of marine sediments
Cameron,E.M. Geology Ottawa	Isotopic stratigraphy of precambrian mineralized basins
Campbell,I.A. Geography Alberta	Erosion rates, sediment delivery ratios and the evolution of the Red Deer badlands
Cannon,W.H. Earth & Atmos. Sc. York	VLBI system development/application of VLBI to geodesy and geodynamics
Carmichael,D.M. Geological Sciences Queen's	Metamorphic studies in Canada
Carroll,R.L. Redpath Museum McGill	Patterns and processes of evolution as evidenced by Paleozoic and Mesozoic vertebrates
Carson,M.A. Geography McGill	Movement of gravel in braided rivers
Cavayas,F. Géographie Montréal	Integration des donnees sur la topographie dans le processus d'analyse de l'imagerie de teledetection en geomorphologie et en geologie
Cerny,P. Earth Sciences Manitoba	Mineralogy, petrology, and genesis of granitic pegmatites
Chao,G.Y. Geology Carleton	1) Phase relations in systems Pd-Bi-Sb, Pt-Bi-Sb, Pd-Bi-Te, Pt-Bi-Te. 2) Mineralogy of the nepheline syenite, Mont St-Hilaire
Chatterton,B.D.E. Geology Alberta	Taxonomic, paleoecologic, biostratigraphic and biogeographic studies of paleozoic trilobite and conodont faunas of Canada
Cheel,R.J. Geology Brandon	A detailed study of laminae in sands and sandstones
Cheel,R.J. Geological Sciences Brock	A detailed study of laminae in sands and sandstones
Cherry,J.A. Earth Sciences Waterloo	Groundwater in thick unweathered clayey deposits: Origin, age and diffusion effects
Chouteau,M.C. Génie minéral Ecole Polytechnique	Application de la méthode magnétotellurique à la prospection minière
Chown,E.H. Earth Sciences Québec-Chicoutimi	Influence of basement on the tectonic evolution of the Chibougamau belt
Church,M.A. Geography British Columbia	Studies of hydraulics and sedimentation in alluvial rivers
Churcher,C.S. Zoology Toronto	Quaternary mammalian faunas, especially of Canada and Africa
Clark,A.H. Geological Sciences Queen's	Origin and delimitation of metallogenetic provinces at convergent plate margins
Clarke,D.B. Geology Dalhousie	Mineralogy, petrology, geochemistry and petrogenesis of igneous rocks
Clarke,G.K.C. Geophys./Astron. British Columbia	Glaciology: field study, theory and instrumentation
Clarke,W.B. Physics McMaster	Investigations of isotope patterns in nature
Clifford,P.M. Geology McMaster	Fracture and shear zone fabrics
Clowes,R.M. Geophys./Astron. British Columbia	Reflection/refraction seismology on land and at sea for lithospheric studies
Cogley,J.G. Geography Trent	Continental palaeogeomorphology and palaeoclimatology
Collerson,K.D. Geology Regina	Archean and proterozoic crust-mantle evolution in the trans-Hudson Orogen and North Atlantic Craton

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Cook,F.A. Geology & Geophys. Calgary	Seismic reflection profiling of structures in crystalline rocks
Copper,P. Geology Laurentian	Evolution and survival strategies of paleozoic brachiopods; ecological succession and mass extinction events in reef/carbonate ecosystems
Crocket,J.H. Geology McMaster	Applications of geochemistry to mineral deposit genesis
Crowley,P.D. Geology Toronto	Petrological pressure - temperature paths resulting from deep crustal deformation
Cruden,D.M. Geology Alberta	Stability of natural slopes in rock
Cumming,G.L. Physics Alberta	Systematics of Pb isotopic variations in ores and rocks - Crustal seismic studies
Dalrymple,R.W. Geological Sciences Queen's	Process sedimentology of nearshore and shallow marine clastics
D'Anglejan,B.F. Inst. Oceanography McGill	Studies in coastal and estuarine sedimentation in subarctic regions
David,M. Génie minéral Ecole Polytechnique	Avancement et transfert des connaissances géostatistiques-systèmes expert
Davidson-Arnott,R.G.D. Geography Guelph	Morphology and movement of sand waves, Long Point, Ontario
Dickin,A.P. Geology McMaster	Isotopic analysis to solve geochronological and petrogenetic problems
Dickinson,W.T. Engineering Guelph	Mechanisms and modelling of soil erosion
Dingwell,D.B. Geology Toronto	Physical and chemical properties of granitic melts
Dionne,J.C. Géographie Laval	Evolution des rives du Saint-Laurent (érosion-sédimentation)
Dixon,J.M. Geological Sciences Queen's	Centrifuge model and field studies in tectonics
Dixon,C.A. Geology Ottawa	Ordovician-devonian invertebrate fossils and sedimentary facies
Doig,R. Geological Sciences McGill	Geological applications of isotopic analyses, seismic hazard
Donaldson,J.A. Geology Carleton	Comparative studies of Precambrian sedimentary rocks
Dosso,H.W. Physics Victoria	Electromagnetic modelling of geomagnetic variations
Dostal,J. Geology Saint Mary's	Geochemistry and petrogenesis of some igneous rocks
Drake,J.J. Geography McMaster	Hydrological variability and geomorphic process rates
Drapeau,G. INRS-Océanolog. Québec - INRS	Sand transport modeling based on field measurements
Dreimanis,A. Geology Western Ontario	Origin of glacigenic deposits and stratigraphy of last glaciation in S.E. Canada
Dubois,J.M.M. Géo. & CARTEL Sherbrooke	Variations quaternaires du niveau marin aux Îles de la Madeleine
Duke,N.A. Geology Western Ontario	Mafic sill-sediment complexes: their tectonic setting, magmatic regime, and associated ore deposits
Dunlop,D.J. Physics Toronto	Rock magnetism and paleomagnetism of continental and oceanic rocks and synthetic equivalents
Dyke,L. Geology Queen's	Outdoor permeameter for study of active layer hydrology in till
Edgar,A.D. Geology Western Ontario	Petrology and geochemistry of mantle derived rocks with emphasis on source regions for alkaline and related magmas
Edmund,A.G. Geology Toronto	Revision and geological history of fossil giant armadillos and ground sloths
Edwards,R.N. Physics Toronto	Electromagnetic exploration at sea with controlled sources-the moses experiments
Elias,R.J. Earth Sciences Manitoba	Ordovician and earliest silurian solitary rugose corals of North America
Ellis,R.M. Geophys./Astron. British Columbia	Refraction seismology and earthquake studies
Elrick,D.E. Land Resource Sc Guelph	Transport phenomena in natural porous media
El-Sabh,M. Oceanography Québec-Rimouski	Estuarine hydrodynamics
England,J. Geography Alberta	Quaternary glaciation, glacio-isostasy and paleoclimatic change, Northern Ellesmere Island
Erdmer,P. Geology Alberta	Structural and metamorphic analysis of allochthonous terranes of central Yukon

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Essex,G.C.F. Applied Math. Western Ontario	Climate theory
Evans,L.J. Land Resource Sc Guelph	Geochemistry of podzolic soil solutions
Evans,M.E. Physics Alberta	Quaternary paleomagnetic and archeomagnetic investigations
Evans,R.D. Environmental Stud. Trent	A study of major cation - trace metal interactions in lake sediments
Fahraeus,L.E. Earth Sciences Memorial	Conodont paleobiology, Lower Paleozoic and Triassic chrono- and biostratigraphy
Farrar,E. Geological Sciences Queen's	Magmatic and tectonothermal evolution of the Pacific basin and its margins - isotopic and geophysical evidence
Farvolden,R.N. Earth Sciences Waterloo	Groundwater discharge phenomena applied to water resources assessment
Fawcett,J.J. Geology Toronto	Field based and experimental studies in igneous and metamorphic petrology
Ferguson,R.B. Earth Sciences Manitoba	Crystal-chemical studies of the rock-forming felspars and other minerals
Filion,L. Géographie Laval	Dynamique holocène des systèmes éoliens du Québec
Fleet,M.E.L. Geology Western Ontario	Crystal chemical and geochemical studies on earth materials
Fletcher,W.K. Geological Sciences British Columbia	Dispersion and sedimentological behaviour of gold in stream sediments
Ford,D.C. Geography McMaster	1) Groundwater flow and cavern genesis, B. Karst studies in Canada 2) U-series dating, stable isotopic, magnetic and organic studies of speleothems
Fowler,C.M.R. Geological Sciences Saskatchewan	The long-term behaviour of the continental crust
Fox,J.S. Geological Sciences McGill	Geochemistry of Besshi and Corbet-type massive sulphide ores
Fox,R.C. Geology/Zoology Alberta	Upper cretaceous and paleocene tetrapods from western Canada
Fralick,P.W. Geology Lakehead	Sedimentological development of Greenstone Belts in Western Ontario
Francis,D.M. Geological Sciences McGill	Origin and evolution of basic magmas in the upper mantle
Frape,S.K. Earth Sciences Waterloo	Fracture mineral geochemistry; water-rock interaction studies in crystalline rocks
Freeze,R.A. Geological Sciences British Columbia	Hydrogeologic conditions and economic constraints in engineering design
French,H.M. Geology/Geography Ottawa	Permafrost and related geomorphic studies, Western Arctic, Canada
Frind,E.O. Earth Sciences Waterloo	Mathematical modelling of flow and transport in hydrogeologic systems
Fritz,P. Earth Sciences Waterloo	Isotope hydrology, isotope geochemistry, paleoenvironments
Fryer,B.J. Earth Sciences Memorial	Direct dating and isotopic tracer studies of ore deposits
Fyfe,W.S. Geology Western Ontario	Geochemistry, tectonics and biosphere interactions
Fyson,W.K. Geology Ottawa	Structural patterns and tectonics of Precambrian metamorphic terrains
Gagnon,P.A. Sci. géo & télédét Laval	Amélioration et automatisation de levés, en géomatique
Gale,J.E. Earth Sciences Memorial	Factors controlling the movement of fluids through fractured argillaceous and crystalline rocks
Gardner,J.S. Geography Waterloo	Glacier ablation zone sediment transport and yield
Gariepy,C. Sciences de la terre Québec-Montréal	Isotopic and trace element evaluation of continental crust development in archaean to recent terrains
Garrett,C.J.R. Oceanography Dalhousie	Physical oceanography
Gauthier,M. Sciences de la terre Québec-Montréal	Métallogénie des gîtes de métaux usuels et précieux au Québec
Geurts,M.A. Géographie Ottawa	Palynostratigraphie et variations climatiques tardiglaciaires et postglaciaires
Ghent,E.D. Geology & Geophys. Calgary	Geochemical and petrologic study of metamorphism and diagenesis
Gibling,M.R. Geology Dalhousie	Strike-slip basins, and their oil shale, coal and hydrocarbons
Gibson,I.L. Earth Sciences Waterloo	Volcanological and petrological processes operative in extensional regimes

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Gilbert,R. Geography Queen's	Glaciomarine sedimentology of arctic fiords
Gillham,R.W. Earth Sciences Waterloo	Contaminant transport in layered media
Gittins,J. Geology Toronto	Petrology of alkali rocks and carbonatites; related niobium ephosphate ores
Godwin,C.I. Geological Sciences British Columbia	Analysis and interpretation of lead isotopes in the Canadian Cordillera
Goodchild,M.F. Geography Western Ontario	Applications of fractals and related concepts in geographical data processing
Goodwin,A.M. Geology Toronto	Origin and development of Archean crust
Gough,D.I. Physics Alberta	Magnetovariation, magnetotelluric and paleomagnetic studies
Goulet,N. Sciences de la terre Québec-Montréal	Synthèse tectonique de la partie nord de la Fosse du Labrador
Granberg,H.B. Geography McGill	Digital modelling of permafrost-terrain relationships
Gratton,Y. Océanographie Québec-Rimouski	On the dynamics of unsteady flows over strong topography
Gray,D.M. Agricult. Eng. Saskatchewan	Simulation of hydrological processes
Gray,J. Physics Alberta	Stable isotope studies of tree rings, peat and cave deposits to determine past climate in Canada
Gray,J.T. Geography Montréal	Application of LANDSAT 5-MSS and TM data to terrain mapping in temperate and Arctic Québec
Greatbatch,R.J. Physics Memorial	Interannual variability in the oceans
Greenhouse,J.P. Earth Sciences Waterloo	Geophysics of quaternary deposits and contaminated groundwater
Greenough,J.D. Geology Mount Allison	Petrogenesis and tectonic significance of Mesozoic volcanism in Atlantic Canada
Greenough,J.D. Geology Saint Mary's	Petrogenesis and tectonic significance of mesozoic volcanism in Atlantic Canada
Greenwood,B. Geology/Geography Toronto	Coastal hydrodynamics and sedimentation

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Greenwood,H.J. Geological Sciences British Columbia	Geological phase equilibrium studies
Grundy,H.D. Geology McMaster	The characterization and crystallization histories of minerals
Guha,J. Sc. appliquées Québec-Chicoutimi	Modélisation de l'évolution et de la mise en place des fluides minéralisateurs associés aux gîtes filoniens archéens
Gwyn,Q.H.J. Géographie Sherbrooke	Modélisation de la géomorphologie et des dépôts glaciaires à partir des images en bandes C et L
Hajnal,Z. Geological Sciences Saskatchewan	1) Seismic investigation of deep seated structures in Saskatchewan 2) Seismic investigation of Precambrian contact zones
Halden,N.M. Earth Sciences Manitoba	Geochemistry of late tectonic granites at the Churchill-Superior margin
Hale,C.J. Geology McMaster	Laboratory simulation and paleomagnetic analysis of precambrian thermochemical remanent magnetizations
Hall,D.H. Earth Sciences Manitoba	Crustal modelling in the Manitoba and Northwester Ontario portion of the Canadian shield
Hall,J.M. Ctre Marine Geol. Dalhousie	The interaction of constructional, tectonic, hydrothermal and magnetization process during oceanic crustal formation
Hall,R.L. Geology & Geophys. Calgary	Taxonomy, biostratigraphy and biogeography of Middle Jurassic ammonites, Western Canada
Halls,H.C. Geology Toronto	Paleomagnetism of mafic igneous rocks
Hanes,J.A. Geological Sciences Queen's	Tectonothermal histories of orogenic terranes and greenstone belts by argon geochronology
Harris,S.A. Geography Calgary	Alpine environmental studies
Harvey,L.D.D. Geography Toronto	Coupled atmosphere-ocean-cryosphere climate modelling
Hattori,K. Geology Ottawa	Geochemical and isotopic study of Archean gold mineralization
Hawthorne,F.C. Earth Sciences Manitoba	Crystal structure, a key to mineral classification and paragenesis
Hay,A.E. Physics Memorial	Coastal and continental shelf oceanography
Hebert,R. Géologie Laval	Pétrologie comparée des roches ultramafiques et mafiques continentales et océaniques

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Hein,F.J. Geology Alberta	Basin analysis: shelf and slope deposits, active and passive margins
Hein,F.J. Geology Dalhousie	Basin analysis: Shelf and slope depostis, active and passive margins
Helmstaedt,H. Geological Sciences Queen's	Structures and fabrics in metamorphic rocks, tectonic settings of mineral deposits, kimberlites and their xenoliths
Heroux,Y. INRS-Géoress. Québec - INRS	Minéralisations et matières organiques (Zn, Pb, Cu, Ag) de l'Archéen et du Phanérozoïque
Hesse,F.R. Geological Sciences McGill	Modern and ancient continental margin and marginal sea sedimentation (transport and deposition, diagenesis, tectonic setting)
Hickin,E.J. Geography Simon Fraser	Recent geomorphic control of sediment and river activity in the coastal mountains of British Columbia
Hicock,S.R. Geology Western Ontario	Geochemical correlation and provenance of Southern Ontario tills
Hill,A.R. Geography York	The role of saturated riparian areas in regulating nitrogen transport from land surfaces into streams
Hillaire-Marcel,C. Géo isoto & géochr Québec-Montréal	Hydrologie, paleohydrologie isotopiques et paleoclimats continentaux
Hiscott,R.N. Earth Sciences Memorial	Sedimentation along continental margins
Hodgson,C.J. Geology Queen's	Metallogeny of precious metal and lithophile element ore environments
Hodych,J.P. Earth Sciences Memorial	Mechanisms of remanence acquisition and retention and the reliability of the paleomagnetic record
Hofmann,H.J. Geology Montréal	Precambrian and Lower Proterozoic paleontology and stratigraphy
Holm,P.E. Geology Windsor	Strain analysis studies in the Grenville Central metasedimentary belt
Howard,K.W.F. Physical Science Toronto	Effects of acid precipitation on groundwater hydrochemistry
Howarth,P.J. Geography Waterloo	Satellite and airborne digital data for studying the physical environment
Hron,F. Physics Alberta	Numerical modelling of seismic waves in complex geological structures
Hsieh,W.W. Oceanography British Columbia	Numerical ocean modelling, remote sensing, sea-ice
Hubert,C. Géologie Montréal	Tectonique et stratigraphie des terrains archéens de l'Abitibi entre Rouyn et Val d'Or, Québec
Huntley,D.A. Oceanography Dalhousie	Nearshore processes and boundary layer dynamics
Hutcheon,I.E. Geology & Geophys. Calgary	Diagenetic model for clastic sequences
Hynes,A.J. Geological Sciences McGill	Orogenic core-zones - the Labrador Trough at 58 degrees N
Ingram,R.G. Oceanography McGill	Interfacial processes in coastal and estuarine regions
Irving,E. Physics Victoria	Paleomagnetism of Cretaceous and Early Tertiary rocks in the Cordillera
Jacobs,J.D. Geography Windsor	Mesoscale climates and paleoclimates in Southern Baffin Island
James,N.P. Earth Sciences Memorial	Facies anatomy and diagenetic evolution of early paleozoic carbonates
Jamieson,R.A. Geology Dalhousie	Metamorphic and tectonic studies in the northern Appalachians
Jensen,O.G. Geological Sciences McGill	Geophysical analysis/Earth mechanics
Jeudy,L.M.A. Foresterie/géodésie Laval	Système de mesure du nord astronomique à +0".1
Johnson,B.D. Oceanography Dalhousie	Disaggregation of marine macroaggregates
Johnson,P.G. Geography Ottawa	Sediment transfer in glacierized basins
Jones,B. Geology Alberta	Diagenetic regimes associated with unconformities in carbonate sequences
Jones,F.W. Physics Alberta	Electromagnetic induction, heat flow, and Earth tides and tilts
Jones,H.G. INRS - Eau Québec - INRS	Snow pack chemistry and melt water quality
Justice,J.H. Geology & Geophys. Calgary	Seismic signal design and inversion
Kanasewich,E.R. Physics Alberta	Geophysical investigation of the crust and mantle

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Karrow,P.F. Earth Sciences Waterloo	Quaternary history and non-glacial environments
Kay,B.D. Land Resource Sc Guelph	Quantitative characterization of mass and heat transfer in freezing soils
Keen,C.E. Geology Dalhousie	Crustal structure of two continent-ocean margins, offshore Eastern Canada
Kehlenbeck,M.M. Geology Lakehead	Structure and stratigraphy of subprovince boundaries in the eastern Superior Province
Kelly,C.A. Microbiology Manitoba	Consumption of H^+ by nitrate and sulfate reduction in acidification * with J.W.M.Rudd(Manitoba)
Kelly,C.A. Biology Winnipeg	Consumption of H^+ by nitrate and sulfate reduction in acidification * with J.W.M.Rudd(Manitoba)
Kerrich,R. Geology Western Ontario	Fluid transport in fault and thrust zones
King,R.H. Geography Western Ontario	Mineralogy, geochemistry and variability of soil components
Kissin,S.A. Geology Lakehead	Crystal chemistry and stabilities of sulphide minerals
Kobluk,D.R. Geology Toronto	Reef simulation model and Devonian cryptic biotas
Koutitonsky,V.G. INRS - Océanol. Québec - INRS	Circulation and mixing in the Jacques Cartier Passage
Kramer,J.R. Geology McMaster	Sorption of trace metals and anions on oxide substrates and organic matter
Krebes,E.S. Geology & Geophys. Calgary	Seismic waves in anelastic media
Kretz,R. Geology Ottawa	Petrology of gabbro dikes
Krogh,T.E. Geology Toronto	Research in geochronology: techniques, tests and applications to geological problems
Kronberg,B.I. Geology Lakehead	Soil and sediment geochemistry
Kronberg,B.I. Geology Western Ontario	Soil and sediment geochemistry
Krouse,H.R. Physics Calgary	Stable isotope fractionation studies

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Kukalova-Peck,J. Geology Carleton	Evolutionary morphology of Paleozoic insects with reference to recent insects
Kyser,T.K. Geological Sciences Saskatchewan	Application of stable isotope compositions to geological problems
Lajoie,J. Géologie Montréal	Sédimentologie de dépôts siliciclastiques archéens, aphébiens, siluriens et récents
Lalonde,A.E. Géologie Ottawa	Petrogenesis and mineralogy of plutonic suites from Wopmay Orogen and the Slave Province
Lambert,R.S.J. Geology Alberta	Isotopic studies related to the evolution of the Cordillera and the mantle
Last,W.M. Science Manitoba	Sedimentology and geochemistry of saline lakes
Laurent,R. Géologie Laval	Pétrologie des ophiolites appalachiennes et de chypre
Lauriol,B.M.F. Géographie Ottawa	Géomorphologie Karstique des massifs calcaires du nord du Yukon
Laverdière,M.R. Sols Laval	Bilan de l'érosion hydrique pour les sols agricoles du Québec soumis à différentes régies
Lebel,J. Océanographie Québec-Rimouski	Hydrogéochimie des estuaires
LeBlond,P.H. Oceanography British Columbia	Ocean waves and coastal oceanography
LeDrew,E.F. Geography Waterloo	Investigation of the role of surface characteristics in climate processes using remotely sensed imagery
Lenz,A.C. Geology Western Ontario	Ordovician to Devonian paleontology, biostratigraphy, paleoecology and stratigraphy of Northern and Arctic Canada
Lespérance,P.J. Géologie Montréal	Stratigraphie de l'Ordovicien Supérieur au Dévonien Inférieur du Québec
Levinson,A.A. Geology & Geophys. Calgary	Exploration and environmental geochemistry
Lewis,J.E. Geography McGill	Surface energy exchange and land surface climatology in northern Baffin Bay
Lewkowicz,A.G. Geography Toronto	Measurement and simulation of permafrost degradation on slopes, Arctic Canada
Lewry,J.F. Geology Regina	Mylonitic rocks, allochthonous packages and suspect terranes in the early proterozoic Trans-Hudson Orogen, Saskatchewan

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Locat,J. Géologie Laval	Inter-relations entre la nature, les processus de formation des dépôts argileux et leur comportement mécanique
Long,B.F.N. INRS-Océanolog. Québec - INRS	Evolution du transport sédimentaire des estuaires de la Côte-Nord du golfe du St-Laurent
Longstaffe,F.J. Geology Alberta	Physico-chemical investigations of water-rock interaction in low-temperature environments
Lortie,G. Etudes nordiques Laval	Les diatomées dans les séquences holocènes tourbeuses et lacustres du Québec: analyse paléoécologique et biostratigraphique
Louden,K.E. Oceanography Dalhousie	Earth structure
Luckman,B.H. Geography Western Ontario	Little ice age in Jasper National Park and environs
Ludden,J.N. Geology Montréal	Geochemical studies of volcanic rocks of the Canadian Cordillera and recent basalt - pantellerite associations
Ludvigsen,R. Geology Toronto	Lower paleozoic trilobite biostratigraphy
Luk,S.H. Geography Toronto	Measurements of soil erodibility and rainfall erosion
MacDonald,G.M. Geography McMaster	Treeline plant population response to postglacial climatic change in N. Central Canada
Mackay,J.R. Geography British Columbia	Origin of permafrost and ground ice, Western Arctic Coast, Canada
Macko,S.A. Earth Sciences Memorial	Organic geochemistry of stable nitrogen isotopes
MacLean,W.H. Geological Sciences McGill	Field studies and phase equilibria studies on the genesis of massive and magmatic sulfide ores
MacRae,N.D. Geology Western Ontario	Quantitative analysis by SIMS and element fractionation modeling
Mahaney,W.C. Geography York	Quaternary history of Mount Kenya and the Virunga Mountains, Rwanda
Malpas,J.G. Earth Sciences Memorial	Constructional processes in ophiolites and the oceanic lithosphere
Mamet,B.L. Géologie Montréal	Microfaciès carbonatés du Paléozoïque: microfaune et microflore
Mandarino,J.A. Geology Toronto	Crystal chemistry and detailed mineralogy of: 1) Selenium and tellurium oxysalts; 2) Coexisting amphiboles, micas and apatites; 3) Titanium-bearing silicates
Mareschal,J.C. Earth Sciences Québec-Montréal	Thermal and mechanical evolution of the continental lithosphere
Martignole,J. Géologie Montréal	Recherches pétrologiques et tectoniques dans la Province de Grenville
Martin,R.F. Geological Sciences McGill	Mineralogical and geochemical adjustments during rock-fluid interaction
Martini,I.P. Land Resource Sc Guelph	Quantitative studies of clastic sediments and rocks
Mathewes,R.W. Biolog. Sciences Simon Fraser	Late-quaternary vegetation and environmental changes in British Columbia
Mayer,L.A. Oceanography Dalhousie	High-resolution seismic stratigraphy
McCann,S.B. Geography McMaster	Sedimentation in vegetated dunes and at the margin of polar glaciers
McCaughey,J.H. Geography Queen's	Energy and radiation balance studies on mature and thinned forests and logged areas
McGowan,C. Zoology Toronto	Ontogeny, phylogeny, and functional morphology in selected vertebrates, recent and fossil
McGugan,A. Geology & Geophys. Calgary	1) Permian conodont biostratigraphy 2) Cretaceous foraminiferal biostratigraphy 3) Recent foraminifera
McNutt,R.H. Geology McMaster	Isotopic studies in high grade terrains, in water-rock interaction and the Andes
Meagher,E.P. Geological Sciences British Columbia	The study of chemical bonding and high pressure crystal chemistry in minerals
Medioli,F.S. Ctre Marine Geol. Dalhousie	Recent and fossil foraminifera and arcellaceans in Eastern Canada & Canadian Arctic
Mereu,R.F. Geophysics Western Ontario	Deep and shallow seismic sounding research
Merriam,J.B. Geological Sciences Saskatchewan	Strain tides
Miall,A.D. Geology Toronto	Basin analysis of fluvial sediments
Michel,F.A. Geology Carleton	Isotope investigations of northern groundwaters, permafrost and related phenomena
Middleton,G.V. Geology McMaster	Field and laboratory studies of clastic sediments

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Miller,H.G. Earth Sciences Memorial	Geophysical investigations of Newfoundland geology - onshore and offshore
Mitchell,R.H. Geology Lakehead	Petrology and geochemistry of kimberlites and alkaline rocks
Moon,W. Earth Sciences Manitoba	Theoretical geophysics research
Moore,R.D. Geography McGill	Snowpack water routing and chemistry
Moore,R.M. Oceanography Dalhousie	Marine trace element geochemistry and Arctic oceanography
Morgan,A.V. Earth Sciences Waterloo	Quaternary insect assemblages, paleoecology, zoogeography, and climatic change
Morton,R.D. Geology Alberta	Mineralogical and geochemical studies on the Dawn Lake uranium deposit, Saskatchewan
Mossman,D.J. Geology Mount Allison	Geological processes involved in ore formation
Mountjoy,E.W. Geological Sciences McGill	Diagenesis of Paleozoic reefs and platforms; structural geology of Jasper-Valemount main ranges
Muecke,G.K. Geology Dalhousie	Evolution of the igneous rocks in the Canadian Arctic Islands and in the Meguma Zone, NS
Muehlenbachs,K. Geology Alberta	Stable isotope exchange studies and their application to geological problems
Murphy,J.B. Geology St. F. Xavier	Late Precambrian - Lower Paleozoic evolution of the Antigonish Highlands, Nova Scotia
Murthy,G. Earth Sciences Memorial	Paleomagnetic and rock magnetic investigations of precambrian and paleozoic rocks from Labrador and from the island of Newfoundland and the study of implication of the results
Mysak,L.A. Mathematics British Columbia	Dynamical oceanography and limnology
Mysak,L.A. Meteorology McGill	Dynamical oceanography and limnology
Nakiboglu,S.M. Surveying Eng Calgary	Global sea level changes and contemporary crustal motion in Canada
Naldrett,A.J. Geology Toronto	Field and experimental studies of Pt and Ni-Cu deposits and their host rocks
Narbonne,G.M. Geological Sciences Queen's	Organism-sediment interactions in Lower Paleozoic carbonates of Canada
Nesbitt,B.E. Geology Alberta	Metamorphism and genesis of base metal sulfide deposits
Nesbitt,H.W. Geology Western Ontario	A comprehensive geochemical study of modern sedimentary basins
Nichol,I. Geological Sciences Queen's	Geochemical exploration for gold
Nicholls,J. Geology & Geophys. Calgary	Studies of magmatic processes
Nickling,W.G. Geography Guelph	An evaluation of the surface and textural controls on the entrainment and transport of sediment by wind
Nisbet,E.G. Geological Sciences Saskatchewan	Studies in Archaean Geology
Nkemdirim,L.C. Geography Calgary	Chinook processes near the ground
Noble,J.P.A. Geology New Brunswick	Mid-Paleozoic faunal history and tectono-sedimentary evolution of basins in the northren Appalachians
Norris,G. Geology Toronto	Palynostratigraphic studies on Mesozoic-Cenozoic miospores and dinoflagellates
Nowlan,G.S. Geology Ottawa	Silurian conodonts of eastern Canada
Nriagu,J. Earth Sciences Waterloo	Sulfur dynamics in acid sensitive watershed - a stable isotope study
Nyland,E. Physics Alberta	Geodynamics of plate margin interactions, seismic aspects
Occhietti,S. Géographie Québec-Montréal	Quaternaire continental et sismochronologie: Vallée et Golfe du Saint-Laurent
Oke,T.R. Geography British Columbia	Heat and mass exchange in the urban atmosphere
Oldenburg,D.W. Geophys./Astron. British Columbia	Inversion and inference of geophysical data
Oldershaw,A. Geology & Geophys. Calgary	Natural and induced diagenesis in clastic and carbonate rocks
Orchard,M.J. Geological Sciences British Columbia	Conodont biostratigraphy, western Canada
Osborn,G.D. Geology & Geophys. Calgary	Holocene/late Pleistocene tephrostratigraphy and glacial chronology

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Ouellet, M. INRS-Eau Québec - INRS	Établissement d'indices paléoécologiques de polluants atmosphériques
Page, P. Sciences de la terre Québec-Montréal	Géochimie des milieux glacio-aquatiques actuels et anciens de l'Est du Canada
Palmer, H.C. Geophysics Western Ontario	Paleomagnetic studies of Precambrian rock units
Pearce, T.H. Geology Queen's	Comparative petrology and laser applications in the earth sciences
Pedersen, T.F. Oceanography British Columbia	Geochemical and palaeoceanographic studies in marine and lacustrine aqueous and sedimentary environments
Pelletier, E. INRS-Océanolog. Québec - INRS	Étude des interactions du sélénium et du mercure en milieu estuarien
Pemberton, S.G. Geology Alberta	Ichnology of storm and tidal dominated sequences
Pe-Piper, G. Geology Saint Mary's	Geologic applications of mafic volcanic rock petrology and geochemistry
Perrault, G. Génie minéral École Polytechnique	Métallogénie de l'or
Peterson, R.C. Geology Queen's	Intra-crystalline cation distribution in rock forming minerals
Pickerill, R.K. Geology New Brunswick	Ichnology, sedimentology and palaeontology of selected Phanerozoic sequences of North America
Piper, D.J.W. Oceanography Dalhousie	Quaternary sedimentation on the continental margin off Eastern Canada
Platt, R.G. Geology Lakehead	Petrogenetic studies of alkaline and related rocks
Pond, G.S. Oceanography British Columbia	Inlet and coastal circulation, dynamics and mixing
Price, A.G. Geography Toronto	Energy balance, snowmelt, runoff and geochemistry in a forest
Prichonnet, G.P. Sciences de la terre Québec-Montréal	Sédimentologie et paléoenvironnement des diamictites et/ou tillites du protérozoïque au Québec central (Abitibi-Moyen nord)
Quinlan, G.M. Earth Sciences Memorial	Vertical motions and the stratigraphic record
Raeside, R.P. Geology Acadia	Stratigraphy, deformation and metamorphism, Cape Breton Highlands and Shelburne metamorphic complex, Nova Scotia
Ranalli, G. Geology Carleton	Role of rheology in lithosphere and mantle dynamics
Reardon, E.J. Earth Sciences Waterloo	Geochemical studies of rock/water interaction
Renaut, R.W. Geological Sciences Saskatchewan	Sedimentology and chemistry of saline lakes in British Columbia and Kenya
Reynolds, P.H. Physics/Geology Dalhousie	Argon geochronology and stable isotope studies
Risk, M.J. Geology McMaster	1) Paleontology of Arctic bivalves 2) Animal-sediment relationships on Artic coastlines
Rivers, C.J.S. Earth Sciences Memorial	Metamorphic and structural studies in Precambrian and Phanerozoic orogens, with particular emphasis on the Grenville Province
Robin, P.Y.F. Geology Toronto	Rock and mineral deformation, measurements and physical chemistry
Robinson, P.T. Geology Dalhousie	Petrology, structure and origin of the ocean crust
Rocheleau, M. Géologie Laval	Sédimentologie, paléogéographie et métallogénie de l'or dans la ceinture d'Abitibi
Rochester, M.G. Earth Sciences Memorial	Theoretical global geophysics and planetary physics
Rodrigues, C.G. Geology Windsor	Paleoecologic and stratigraphic significance of foraminiferida, ostracoda, and invertebrate macrofossils in the Champlain Sea basin
Roeder, P.L. Geological Sciences Queen's	Experimental and microprobe study of basic igneous rocks
Rogerson, R.J. Earth Sciences Memorial	Glaciers in Northern Labrador
Ross, J.V. Geological Sciences British Columbia	Structure and mechanical properties of common rocks: structural studies in central British Columbia
Roulet, N.T. Geography York	Groundwater and soil moisture studies in mid-latitude wetlands
Rouse, G.E. Botany British Columbia	Tertiary palynostratigraphy in western Canada
Rouse, W.R. Geography McMaster	Advective influence of Hudson Bay on terrestrial climate and permafrost
Roy, A.G. Géographie Montréal	Flow and sedimentary processes at river junctions

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Rucklidge,J.C. Geology Toronto	Geological studies using ultra-sensitive analysis
Ruddick,B.R. Oceanography Dalhousie	Spindown, dissipation, and mixing of a mediterranean salt lens
Russell,J.K. Geological Sciences British Columbia	Volcanic petrology of hawaiian lavas
Russell,L.S. Geology Toronto	The Cretaceous-Tertiary transition in Alberta; biostratigraphy of the Edmonton Group
Russell,R.D. Geophys./Astron. British Columbia	1) Isotopic studies of earth evolution 2) Geophysical instrumentation
Rust,B.R. Geology Ottawa	Studies of alluvial and related clastic sedimentation
Rutherford,G.K. Geography Queen's	Pedogenesis of soils on basic igneous rocks
Rutter,N.W. Geology Alberta	Amino acid dating techniques
Ryall,P.J.C. Geology Dalhousie	Magnetic properties of sea floor basalts and structure of mid-ocean ridges
Samson,I.M. Geological Sciences McGill	Fluid evolution, alteration and ore deposition at the Mt. Pleasant W-Mo-Bi deposit
Samson,I.M. Geology Windsor	Fluid evolution, alteration and ore deposition at the Mt. Pleasant W-Mo-Bi deposit
Sanderson,B.G. Physics Memorial	Lagrangian dynamics and eddy-diffusion
Sarjeant,W.A.S. Geological Sciences Saskatchewan	Fossil dinoflagellate cysts and acritarchs; morphology, evolutionary relationships and application in palaeoecology and biostratigraphy
Sauchyn,D.J. Geography Regina	Late Quaternary landscape evolution, Cypress Hills
Scarfe,C.M. Geology Alberta	Physical and chemical properties of silicate melts of geological interest
Schenk,P.E. Geology Dalhousie	1) Sedimentology of transitional units in Lower Paleozoic Meguma continental embankment 2) Jurassic carbonate petrology of Nova Scotia and Portugal
Schloessin,H.H. Geophysics Western Ontario	Physical properties of matter under conditions of planetary interiors
Schreier,H. Soil Science British Columbia	Using remote sensing techniques to quantify soil degradation processes
Schwarcz,H.P. Geology McMaster	Isotopic geochemistry
Schwartz,F.W. Geology Alberta	Exchange processes and mass transport in groundwater systems
Schweger,C.E. Anthropology Alberta	Pleistocene paleoecology and stratigraphy of Alaska-Yukon tephras and paleoecology of the ice-free corridor, Alberta
Schwerdtner,W.M. Geology Toronto	Strain patterns of large structures in the Canadian shield
Scott,D.B. Ctr Marine Geol. Dalhousie	Microfossil studies in Eastern Canada-applications to paleoceanography and biostratigraphy
Scott,S.D. Geology Toronto	Geology and geochemistry of modern and ancient massive sulfide deposits
Seguin,M.K. Geology Laval	Paleomagnetism and permafrost geophysics
Shaw,D.M. Geology McMaster	Geochemical studies of minerals and rocks
Shaw,J. Geography Queen's	Processes of glacial sedimentation and landformation
Silverberg,N. Oceanography Québec-Rimouski	Sediment accumulation phenomena in the St. Lawrence Estuary
Simony,P.S. Geology Calgary	Tectonic studies in Southern Cordillera
Sinclair,A.J. Geological Sciences British Columbia	Anomaly recognition in multivariate data for more efficient mineral exploration
Singh,B. Geography Montréal	Characterization and modeling of evapotranspiration on a meso scale
Skippen,G.B. Geology Carleton	An experimental and field study of metamorphic rocks
Sklash,M.G. Geology Windsor	Age of water in the freshwater aquifer of S.W. Ontario
Slaymaker,H.O. Geography British Columbia	Runoff, solute and sediment production and transport in mountain basins, BC
Smalley,I.J. Earth Sciences Waterloo	Glacial soils project
Smart,C.C. Geography Western Ontario	Karst hydrology and the hydrology of glacier beds

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Smith,D.G. *Geography* Calgary	Lithofacies models for medium and low energy fluvial and micro and meso tidal-influenced meandering river systems in N.Canada and Ecuador
Smith,D.G.W. Geology Alberta	Applications of the electron microprobe in mineralogy, petrology and meteoritics
Smith,J.L. Geological Sciences British Columbia	Mass and heat transfer in porous and fractured media
Smith,M.W. Geography Carleton	Field observations of frost heave and stresses in frozen ground
Smith,P.L. Geological Sciences British Columbia	The lower jurassic of western North America
Smith,T.F. Geology Windsor	The geochemistry and petrogenesis of the volcanic rocks in the Grenville Supergroup
Smylie,D.E. Earth & Atmos. Sc. York	Earth dynamics
Spencer,R.J. Geology & Geophys. Calgary	Geochemical evolution of the western Canada sedimentary basin
Spooner,E.T.C. Geology Toronto	The fluid inclusion gas species, and isotope geochemistry of hydrothermal ore deposits
Spray,J.G. Geology New Brunswick	Metamorphic processes in basic and ultrabasic rocks and in shear zones
Starkey,J. Geology Western Ontario	Textures and microstructures of deformed rocks (an application of image analysis)
Stauffer,M.R. Geological Sciences Saskatchewan	1) Structures in rocks 2) Exploration seismology in Precambrian Shield
Stearn,C.W. Geological Sciences McGill	Paleoecology of reefs
Stein,J. Sciences forestières Laval	Détermination du contenu en eau liquide de la neige par la méthode de la réflectométrie en domaine temporel
Stesky,R.M. Earth/Planet. Sci. Toronto	Geophysical and mechanical properties of rocks
Stevens,R.K. Earth Sciences Memorial	Evolution of early Paleozoic oceans and continental margins
Stockey,R.A. Botany Alberta	Cretaceous and teritary plants from western Canada
Strangway,D.W. Geology Toronto	Magnetic and electrical studies of geological significance

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Strangway,D.W. Geology British Columbia	*Magnetic and electrical studies of geological significance*
Strong,D.F. Earth Sciences Memorial	Crustal and metallogenic studies of regions bordering the North Atlantic
St. Seymour,K. Geology Concordia	Chemostratigraphy of greenstone belts, Slave Province, NWT, Canada
Sundby,B. Oceanography Québec-Rimouski	Early diagenesis of transition metals in coastal marine sediments
Susak,N.J. Geology New Brunswick	Chemistry of hydrothermal solutions
Symons,D.T.A. Geology Windsor	Paleomagnetic studies: Cordilleran geotectonics and ore genesis
Tassé,N. INRS-Géoress. Québec - INRS	Sédimentation et diagenèse en relation avec les minéralisations dans les basses-terres du Saint-Laurent
Taylor,C.H. Geography Trent	1) Hydrology of catchments in the Dorset Lakes region 2) Effects of urbanization on streamflow 3) Sediment yield from an agricultural drain
Teller,J.T. Earth Sciences Manitoba	History of Lake Agassiz and its outflow to the Great Lakes
Thode,H.G. Chemistry McMaster	Mass spectrometric, nuclear and isotope chemistry and geochemistry studies
Thomson,C.J. Geological Sciences Queen's	Synthetic seismograms for anisotropic and inhomogeneous media
Torrance,J.K. Geography Carleton	Oxide minerals in leda clay
Trudel,P. Génie minéral Ecole Polytechnique	Aspects métallogéniques et gîtologiques de certaines minéralisations d'or de la ceinture volcanique de l'Abitibi, nord-ouest du Québec
Trzcienski,W.E. Géologie Montréal	Petrology & tectonics of the Quebec Appalachians
Turek,A. Geology Windsor	Geochronological studies of the archean
Turnock,A.C. Earth Sciences Manitoba	Synthesis and characterization of rock-forming minerals, alteration zones
Ulrych,T.J. Geophys./Astron. British Columbia	Time series analysis and inverse theory
Van de Poll,H.W. Geology New Brunswick	Paleoclimatic and depositional history of the permo-pennsylvanian transition sequence of eastern Canada

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Vanicek,P. Surveying Eng New Brunswick	Gravity
Van Wagoner,N.A. Geology Acadia	Physical volcanology and tectonic history of Proterozoic-Cretaceous volcanic terrains: SE Cape Breton, SW New Brunswick, and the Amerasian Basin
Veizer,J. Geology Ottawa	Evolution of the terrestrial exogenic system
Von Bitter,P.H. Geology Toronto	Carboniferous and permian conodont biostratigraphy and palaeoecology, Arctic Canada
Vreeken,W.J. Geography Queen's	Quaternary soil-landscapes in southwestern Saskatchewan
Waldron,J.W.F. Geology Saint Mary's	Sedimentary and structural evolution of Cambro-Ordovician continental margin sediments, Canadian Appalachians
Walker,R.G. Geology McMaster	Development of clastic facies models
Wardlaw,N.C. Geology & Geophys. Calgary	Fluid flow in sedimentary rocks and oil and gas production
Watkinson,D.H. Geology Carleton	Genetic models for precious-metal deposits
Weaver,J.T. Physics Victoria	Electromagnetic induction in the earth and oceans
Webster,I.T. Physics Memorial	The dynamics of the circulation on the Labrador Shelf
Welhan,J.A. Earth Sciences Memorial	Hydrothermal fluids and gases at mid-ocean ridges: Stable isotope studies
West,G.F. Physics Toronto	Applied, regional and tectono-geophysics
Westermann,G.E.G. Geology McMaster	Jurassic ammonites and cephalopod functional morphology
Westgate,J.A. Geology Toronto	Tephra studies in western North America and East Africa
White,J.C. Geology New Brunswick	Subsolidus phenomena in deformed minerals
Wicks,F.J. Geology Toronto	Studies of serpentine minerals
Williams,H. Earth Sciences Memorial	Tectonic synthesis of Humber Arm Allochthon and Lithoprobe East geologic studies
Williams,P.F. Geology New Brunswick	Deformation and the development of fabric and microstructure
Williams-Jones,A.E. Geological Sciences McGill	The metallogeny of Cu, Mo, W and Sn in Gaspé and New Brunswick
Wilson,M.V.H. Zoology Alberta	Late Cretaceous and Early Tertiary fishes of North America
Wilton,D.H.C. Earth Sciences Memorial	Metallogenic studies of the central mineral belt, Labrador
Woo,M.K. Geography McMaster	Storage and runoff processes in permafrost and wetland terrains
Wood,S.A. Geological Sciences McGill	Solubility of ore-forming minerals in hydrothermal solutions
Woods,D.V. Geological Sciences Queen's	Geomagnetic deep sounding studies in North America using magnetometer arrays
Woussen,G. Sc. appliquées Québec-Chicoutimi	Étude comparative du massif d'anorthosite du Lac-St-Jean (Province de Grenville) et du massif d'anorthosite de la Ronde (Province du Supérieur)
Wright,J.A. Earth Sciences Memorial	Geophysical studies of the lithosphere in Atlantic Canada
Yedlin,M. Geophys./Astron. British Columbia	Exploration - oriented theoretical geophysics
York,D. Physics Toronto	Geochronology and isotope studies
Young,G.M. Geology Western Ontario	Stratigraphy, sedimentology and geochemistry of Proterozoic rocks
Young,R.P. Geological Sciences Queen's	Ultrasonic spectroscopy in rock property characterisation
Zentilli,M. Geology Dalhousie	Metallogenic studies in Nova Scotia and the Central Andes
Zodrow,E.L. Geology Cape Breton	Carboniferous stratigraphy: Sydney coalfield, Nova Scotia

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